Chapter NR 154

AIR POLLUTION CONTROL

History: Chapter NR 154 as it existed on March 31, 1972 was repealed and a new chapter NR 154 was created, Register, March, 1972, No. 195, effective April 1, 1972.

FOREWORD

Chapter 144, Stats., directs the department of natural resources to organize a comprehensive program to enhance the quality, management, and protection of the state's air resources. These rules are one part of that program. Chapter 144 also stresses the role of county government in establishing local air pollution control programs in cooperation with the department.

The objectives of these rules are to maintain standards of air quality at a level which will provide adequate protection to public health and welfare, and to prevent detrimental effect on property and our environment.

Nothing in these rules or in ch. 144, Stats., prohibits a county or local jurisdiction from adopting more restrictive ordinances where local conditions indicate their need. These rules, all or in part, may be adopted by reference by a county or municipality.

It shall be the policy of the department to seek reasonable uniformity among local air pollution control ordinances in order to make the statewide comprehensive program more effective and less complicated for all persons concerned.

These rules are subject to periodic revision to reflect advancing control technology, increasing knowledge of the effect on health of sub-acute long term exposure to air pollutants and increased knowledge of the effect of pollutants on plant life, animal life, soils, and water resources.

NR 154.01 Definitions. (1) "Accumulator" means the reservoir of a condensing unit receiving the condensate from the condenser. This includes hot wells.

(2) "Affected facility" is any type or class of air contaminant source which is required to submit a notice of intent and plans and specifications to the department prior to construction.

(3) "Air contaminant" means dust, fumes, mist, liquid, smoke, other particulate matter, vapor, gas odorous substances, or any combination thereof but not including uncombined water vapor.

(4) "Air contaminant source" is any facility, building, structure, equipment, vehicle, or action, or combination thereof which may directly or indirectly result in the emission of any air contaminant.

(a) "Stationary source" is any facility, building, structure, installation, or action, or combination thereof which may directly or indirectly result in the emission of any air contaminant at a fixed location.

1. "Direct source" is any stationary source which may directly result in the emission of any air contaminant at a fixed location (e.g., building demolition, foundry, grain elevator, gravel or stone quarry, paper mill, power plant, etc.).

2. "Indirect source" is any stationary source which conveys motor vehicles or which attracts or may attract mobile source activity and thus indirectly causes the emission of any air contaminant. Such indirect sources include, but are not limited to:

a. Highways and roads.

b. Parking facilities.

c. Retail, commercial and industrial facilities.

d. Recreation, amusement, sports and entertainment facilities.

e. Airports.

f. Office and government buildings.

g. Apartment and condominium buildings.

h. Education facilities.

(b) "Portable source" is any facility, installation, operation or equipment which may directly result in the emission of any air contaminant only while at a fixed location but is capable of being transported to a different location (e.g., portable asphalt plant, portable package boiler, portable air curtain destructor, etc.). A modified portable source or a source which has never received a plan approval shall be considered a direct stationary source for the purpose of initial department approval of the source pursuant to sections NR 154.04 and NR 154.05.

(c) "Semistationary source" is any facility, operation or equipment that has the capability of emitting any air contaminant while moving, but generally does not emit while moving (e.g., diesel cranes, air compressors, and electric generators such as those used at construction sites, etc.).

(d) "Mobile source" is any motor vehicle or equipment other than a semistationary source which is capable of emitting any air contaminant while moving (e.g., automobile, bulldozer, bus, locomotive, motorboat, motorcycle, snowmobile, steamship, truck, etc.).

(5) "Aircraft operation" is a landing or takeoff.

(6) "Air curtain destructor" is an incineration device which utilizes a pit for burning combustible matter, into which air is blown at high velocity through a manifold and nozzle system along one side of the pit to create a turbulent, vortical flow of air and combustible gases in the pit to bring about complete combustion.

(7) "Air pollution" is the presence in the atmosphere of one or more air contaminants in such quantities and of such duration as is or tends to be injurious to human health or welfare, animal or plant life, or property or would unreasonably interfere with the enjoyment of life or property.

(8) "Air pollution episode levels" means levels of air quality which are so degraded as to pose imminent danger to public health.

(a) "Alert": The alert level is that concentration of one or more air contaminants at which the first stage control actions begin.

(b) "Warning": The warning level indicates air quality is continuing to degrade and that additional control actions are necessary.

(c) "Emergency": The emergency level indicates that the air quality is continuing to degrade to a level which should never be reached and that the most stringent control actions are necessary.

(9) "Air quality maintenance area" means an area designated pursuant to federal or Wisconsin laws as having the potential for exceeding any of the ambient air quality standards.

(10) "Air region" means an area such as an AQCR designated pursuant to federal or Wisconsin laws in which a program to maintain or achieve air standards is implemented on a regional basis.

(11) "Ambient air" means the portion of the atmosphere external to buildings and to which the general public has access.

(12) "API" means American Petroleum Institute, 2101 L Street, N.W., Washington, D.C. 20001.

(13) "Application area" means the area where a coating is applied by spraying, dipping or flowcoating techniques.

(14) "Approved" means approved by the department of natural resources.

(15) "AQCR" means air quality control region. Air quality control regions all or part of which lie in Wisconsin are delineated in NR 155.02(2).

(16) "Areawide air quality analysis" means a macroscale analysis utilizing a modeling technique approved by the department.

(17) "Asbestos" means any of the six naturally occurring hydrated mineral silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite, and temolite.

(a) "Asbestos material" means asbestos or any material containing asbestos.

(b) "Asbestos mill" means any facility engaged in the conversion or any intermediate step in the conversion of asbestos ore into commerical asbestos. Outside storage of asbestos materials is not considered a part of such a facility.

(c) "Asbestos tailings" means any solid waste products of asbestos minings or milling operations which contain asbestos.

(18) "ASME" means American Society of Mechanical Engineers, 345 E. 47th Street, New York, New York 10017.

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

(20) "Associated parking area" means a parking facility or facilities owned and/or operated in conjunction with an indirect source.

(21) "ASTM" means American Society for Testing and Materials, 1916 Race St., Philadelphia, PA 19103.

(22) "Automobile" means all passenger cars or passenger car derivatives capable of seating 12 or fewer passengers.

(23) "Average daily traffic (ADT)" means the total traffic volume during a given time period in whole days greater than one day and less than one year divided by the number of days in that time period.

(24) "Average monthly storage temperature" is, for the purpose of petroleum liquid storage, an arithmetic average calculated for each calendar month, or portion thereof if storage is for less than a month, from bulk liquid storage temperatures determined at least once every 7 days.

(25) "Boiler" means any device with an enclosed combustion chamber in which fuel is burned to heat a liquid for the primary purpose of producing heat or power by indirect heat transfer.

(26) "Bottom filling" means the filling of a tank truck or stationary storage tank through an opening that is flush with or near the tank bottom.

(27) "BTU" means British thermal unit.

(28) "Blade coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a straight-edged blade that spreads the coating evenly over the full width of the substrate.

(29) "Bulk gasoline plant" means a gasoline storage and distribution facility which receives gasoline from bulk terminals, stores it in stationary storage tanks, and subsequently distributes it to gasoline dispensing facilities.

(30) "Bulk gasoline terminal" means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck.

(31) "Capture system" means the equipment (including hoods, ducts, fans, etc.) used to contain, capture, or transport a pollutant to a control device.

(32) "Coating applicator" means a device or devices used at a single location in a coating line to apply a surface coating of a particular material.

(33) "Coating line" means one or more apparatus or operations, which may include a coating applicator, flash-off area, and oven, wherein a surface coating is applied, dried, and/or cured.

(34) "Coil coating" means the coating of any flat metal sheet or strip that comes in rolls or coils.

(35) "Cold cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

(36) "Commence construction" means to engage in a program of onsite construction, including site clearance, grading, dredging or landfilling specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source.

(37) "Commence modification" means to engage in a program of onsite modification which may include site clearance, grading, dredging or landfilling in preparation for a specific modification of a stationary source.

(38) "Commercial asbestos" means any variety of asbestos which is produced by extracting asbestos from asbestos ore.

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

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

(41) "Continuous vapor control system" means a vapor control system that destroys or removes vapors, such as those displaced from tanks during filling, on a demand basis without intermediate accumulation.

(42) "Control device" means equipment used to destroy or remove air contaminant(s) in a gas stream prior to emission.

(43) "Conveyorized degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.

(44) "Crude petroleum" means a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is liquid at standard conditions.

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

(46) "Cutback asphalt" means asphalt cement which has been liquefied by blending with petroleum solvents (diluents) other than residual oils. Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function. Emulsified asphalt which contains less than 5% by weight petroleum solvents (disregarding any residual oils added) are not included in this definition.

(47) "Day" means a 24-hour period beginning at midnight.

(48) "Delivery vessel" means a tank truck or trailer or a railroad tank car equipped with a storage tank used for the transport of gasoline from sources of supply to stationary storage tanks of bulk gasoline plants or gasoline dispensing facilities.

(49) "Department" means the department of natural resources, state of Wisconsin.

(50) "Dose" means the total exposure to a pollutant over a specified time period.

$$\text{Dose} = \int_{T_1}^{T_2} C\,dT$$

where T_1 is the starting time, T_2 the end of the time period and C is the pollutant concentration which varies with time, $C = f(T)$.

(51) "Emergency or reserve equipment" means that equipment used when normal equipment fails, or used only to meet high peak loads.

(52) "Emission" means a release, whether directly or indirectly, or any air contaminant to the ambient air.

(53) "Emulsified asphalt" means an emulsion of asphalt cement and water which contains a small amount of an emulsifying agent; a heterogeneous system containing 2 normally immiscible phases (asphalt and water) in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase.

(54) "End sealing compound" means, for the purpose of can coating, a synthetic rubber compound which is coated onto can ends and which functions as a gasket when the end is assembled on the can.

(55) "Equivalent air-dried kraft pulp" means pulp production which produces a loading of black liquor solids to the recovery furnace equivalent to that loading produced with kraft pulp.

(56) "Equivalent opacity" means an opacity of 20% per Ringlemann number.

(57) "Exterior base coating" means, for the purpose of can coating, a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.

(58) "Fabric coating" means the coating or printing of a textile substrate with a blade, roll, rotogravure or dip coater, or other coating applicator, to impart properties that are not initially present, such as strength, stability, water or acid repellancy, or appearance.

(59) "Facility" means an establishment—residential, commercial, institutional or industrial—which emits or causes emissions of air contaminants to the ambient air.

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

(61) "Flashoff area" means the space between the application area and the oven.

(62) "Floating roof" means a storage tank cover consisting of a double deck or pontoon single deck, which rests upon and is supported by the petroleum liquid being contained, and is equipped with a closure seal or seals to seal the space between the roof edge and tank wall. The floating roof may be either a covered external floating roof in an open storage tank or an internal floating cover beneath a fixed roof.

(63) "Forebays" mean the primary sections of a wastewater separator.

(64) "Freeboard height" means, for a cold cleaner, the distance from the liquid solvent level in the degreaser tank to the lip of the tank. For a vapor degreaser it means the distance from the top of the vapor zone to the lip of the degreaser tank.

(65) "Freeboard ratio" means the freeboard height divided by the width of the degreaser.

(66) "Fuel" means any solid, liquid or gaseous materials used to produce useful heat by burning.

(67) "Fuel gas" means any gas which is generated by a petroleum refinery process unit or by a petroleum liquid transfer operation and which is combusted, including any gaseous mixture of natural gas and fuel gas which is combusted.

(68) "Fugitive dust" means solid airborne particles emitted from any source other than a flue or stack.

(69) "Furniture metal coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.

(70) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 27.6 kilo Pascals (4 pounds per square inch absolute) or greater.

(71) "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

(72) "Highway project" means all or a portion of a proposed new or modified section of highway. Where an environmental impact document is to be prepared, the highway project may be taken to cover the same length of highway.

(73) "Hydrocarbon" means any organic compound containing carbon and hydrogen.

(74) "Implementation plan" means a plan adopted to implement, maintain, and enforce air standards within an air region or portion thereof.

(75) "Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned to produce solid and gaseous residues containing little or no combustible material.

(76) "Interior sheet base coating" means, for the purpose of can coating, a coating applied by roller coater or spray to the interior side of sheets from which cans are formed to provide a protective lining between the can metal and product.

(77) "Interior body spray" means, for the purpose of can coating, a coating sprayed on the interior of the can body to provide a protective film between the product and the can.

(78) "Intermittent vapor control system" means a vapor control system that employs an intermediate vapor holder to accumulate vapors displaced from tanks during filling. The control device destroys or removes the accumulated vapors only during automatically controlled cycles.

(79) "Isokinetic sampling" means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the same point.

(80) "Kraft process" means any pulping process which uses an alkaline sulfide solution containing sodium hydroxide and sodium sulfide for a cooking liquor.

(81) "Large appliances" means doors, cases, lids, panels and interior support parts of residential and commercial washers , dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products. Not included are products of such weight that they are normally lifted only with powered lifting equipment or products which are intended to be permanently fastened in place.

(82) "Light-duty trucks" means any motor vehicles rated at 3864 kilograms (8500 pounds) gross weight or less which are designed primarily for the purpose of transporting goods and materials, or derivatives of such vehicles.

(83) "Loading rack" means an aggregation or combination of gasoline loading equipment arranged so that all loading outlets in the combination can be connected to a tank truck or trailer parked in a specific loading space.

(84) "Magnet wire coating" means the process of applying a coating of electrically insulating varnish or enamel to alumium or copper wire for use in electrical machinery.

(85) "Manufacturing plant" means a facility where parts are manufactured, finished or assembled for eventual inclusion into a finished product ready for sale to retailers. With respect to the manufacture of motor vehicles, customizers, body shops and other repainters are not included in this definition.

(86) "Modification" means any change in physical size or method of operation of a stationary or portable source which increases the amount of any air contaminant emitted except that:

(a) Routine maintenance and repair shall not be considered physical changes.

(b) The following shall not be considered changes in method of operation unless the change will cause or exacerbate a violation of any ambient air quality standard.

1. An increase in production rate if such increase does not exceed the operating design capacity of the stationary source.

2. An increase in the hours of operation.

3. Use of an alternate fuel or raw material.

4. Resumption of operation of existing equipment after a period of closure.

(87) "New direct or portable source" means a direct or portable source, the construction or modification of which is commenced after April 1, 1972, or the effective date of promulgation of an emission limit which applies.

(88) "New indirect source" means an indirect source, the construction or modification of which is commenced after July 1, 1975.

(89) "Nitrogen oxides" means all oxides of nitrogen except nitrous oxide.

(90) "Noncondensibles" means gases and vapors from processes that are not condensed with the equipment used in those processes.

(91) "Opacity" means the state of a substance which renders it partially or wholly impervious to rays of light. (20% opacity equals one unit on the Ringlemann Chart.)

(92) "Open burning" means oxidation from which the products of combustion are emitted directly into the ambient air without passing through a stack or chimney.

(93) "Open top vapor degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

(94) "Operator" means any person who leases, controls, operates or supervises a facility, an air contaminant source, or air pollution control equipment.

(95) "Organic compound" means a compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

(96) "Oven" means, for the purpose of surface coating, a chamber within which heat is used to bake, cure, polymerize, or dry a surface coating.

(97) "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss and to protect the finish against abrasion and corrosion.

(98) "Ozone season" means the period from May 1 through September 30 of any year.

(99) "Paper coating" means application of the uniform coatings put on paper and pressure sensitive tape regardless of substrate. Related web coating processes on plastic fibers and on metal foil are included in

this definition but processes such as printing where the coating is not uniform across the web are not included.

(100) "Parking capacity" means the maximum number of vehicles which a parking facility is designed to hold based on an allotment of not more than 350 square feet of stall and aisle area per vehicle.

(101) "Particulate asbestos material" means any finely divided particles of asbestos material.

(102) "Particulate or particulate matter" means:

(a) For an existing direct or portable source: Any material which exists as a solid at standard conditions.

(b) For a new direct or portable source: Any material which exists as a solid or liquid at standard conditions except uncombined water.

(103) "Parts per million (ppm)" means parts of a contaminant per million parts of gas by volume.

(104) "Peak hour volume" means the highest one-hour traffic volume in a calendar year.

(105) "Penetrating prime coat" means an application of low-viscosity liquid asphalt to an absorbent surface to prepare it for an asphalt surface.

(106) "Performance test" means measurements of emissions or other procedures used for the purpose of determining compliance with a standard of performance.

(107) "Person" means any individual, corporation, company, cooperative, owner, tenant, lessee, syndicate , partnership, co-partnership, firm, association, trust, estate, public or private institution, joint stock company, political subdivision of the state of Wisconsin, state agency, or any legal successor, representative, agent or agency of the foregoing.

(108) "Petroleum" means the crude oil removed from the earth and the oils derived from tar sands, shale, coal and coke.

(109) "Petroleum liquid" means crude petroleum, petroleum, condensate and any finished or intermediate products manufactured or extracted in a petroleum refinery or in a facility which produces oils from tar sands, shale, coal or coke.

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

(111) "Photochemically reactive organic substances" means, for a source on which construction or modification is commenced after July* 1, [August 1,] 1979, any organic compound. For a source on which construction or modification is commenced on or before July* 1, [August 1,] 1979, it means any of the following:

(a) Group A: Hydrocarbons, alcohols, aldehydes, esters, ethers or ketones, which have olefinic or cyclo-olefinic type unsaturation.

(b) Group B: Aromatic compounds with 8 or more carbon atoms to the molecule, except ethylbenzene.

(c) Group C: Ethylbenzene, toluene, or ketones having branched hydrocarbon structures.

(d) A solvent or mixture of organic compounds in which any of the following conditions are met:

1. More than 20% of the total volume is composed of any combination of compounds listed in groups A, B or C above.

2. More than 5% of the total volume is composed of any combination of the compounds listed in group A above.

3. More than 8% of the total volume is composed of any combination of the compounds listed in group B above.

(112) "Prime coat" means the first film of coating applied to a product in a multiple-coat surface coating operation.

(113) "Process gas" means any gas generated by a petroleum refinery process unit except fuel gas and process upset gas as defined in this section.

(114) "Process line" means one or more actions or unit operations which must function simultaneously in order to manufacture or modify a product (e.g. a spray booth, conveyor and drying oven are considered a process line).

(115) "Process upset gas" means any gas generated by a petroleum refinery process unit as a result of start-up, shut-down, upset or malfunction.

(116) "Process weight" means the total weight of all materials introduced into any direct source operation, except liquid fuels, gaseous fuels and air.

(117) "Proportional sampling" means sampling at a rate that produces a constant ratio of flow in the sampling nozzle to stack gas flow rate.

(118) "Quench area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

(119) "Reasonably available control technology (RACT)" means that which provides the lowest emission rate that a particular source is capable of achieving by the application of control technology that is reasonably available considering technological and economic feasibility. Such technology may previously have been applied to similar, but not necessarily identical, source categories.

(120) "Refinery process unit" means any segment of a petroleum refinery in which a specific processing operation is conducted.

(121) "Reid vapor pressure" means the absolute vapor pressure of volatile crude petroleum and volatile nonviscous petroleum liquids except liquefied petroleum gases as determined by ASTM-D-232-72 (reapproved 1977).

(122) "Ringlemann Chart" means the chart published by the U.S. bureau of mines in which are illustrated graduated shades of grey to black for use in estimating the shade or density of smoke. (One unit on the Ringlemann Chart equals 20% opacity).

Note: See Ringlemann Chart published December, 1950, by the U.S. bureau of mines. Copies of "Fundamentals of Smoke Abatement," December, 1950, Ringlemann Chart, Information Circular 7588, are available for inspection at the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from the U.S. department of interior, Washington, D.C.

(123) "Roll coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.

(124) "Rotogravure coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is transferred to the substrate from the recessed areas on the coating roll.

(125) "Secretary" means the secretary of the department of natural resources, state of Wisconsin.

(126) "Shutdown" means the cessation of operation of a direct or portable source or of emission control equipment.

(126m) "Silt content" means that portion by weight of a particulate material which will pass through a no. 200 (75 micron) wire sieve as determined by the dry method in ASTM C136-76 or other method approved by the department.

(127) "Single coat" means a single film of coating applied directly to a metal substrate, omitting the primer application.

(128) "Smoke" means all products of combustion of sufficient density to be observable, including but not limited to carbon, dust, fly ash, and other particles, but not including uncombined water.

(129) "Solvent" means organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

(130) "Solvent metal cleaning" means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

(131) "Splash filling" means the filling of a tank truck or stationary storage tank through a pipe or hose whose discharge opening is more than 15.2 centimeters (6 inches) above the bottom of the tank being filled.

(132) "Stack" means any device or opening designed or used to emit air contaminants to the ambient air.

(133) "Standard conditions" means a temperature of 20° Celsius (centigrade) (68°F) and a pressure of 760 millimeters of mercury (29.92 inches of mercury).

(134) "Standard metropolitan statistical area (SMSA)" means such area as designated by the U.S. bureau of budget in the following publication: *Standard Metropolitan Statistical Areas,* issued in 1967, with subsequent amendments. The following Wisconsin counties are included in SMSA's:

(a) Appleton-Oshkosh, Wisconsin SMSA:

1. Calumet county

2. Outagamie county

3. Winnebago county

(b) Duluth-Superior, Minnesota-Wisconsin SMSA: Douglas county

(c) Eau Claire, Wisconsin SMSA:

1. Eau Claire county

2. Chippewa county

(d) Green Bay, Wisconsin SMSA: Brown county

(e) Kenosha, Wisconsin SMSA: Kenosha county

(f) La Crosse, Wisconsin SMSA: La Crosse county

(g) Madison, Wisconsin SMSA: Dane county

(h) Milwaukee, Wisconsin SMSA:

1. Milwaukee county

2. Ozaukee county

3. Washington county

4. Waukesha county

(i) Minneapolis-St. Paul, Minnesota-Wisconsin SMSA: St. Croix county

(j) Racine, Wisconsin SMSA: Racine county

Note: See *Standard Metropolitan Statistical Areas,* Revised Edition, 1975, executive office of the President, office of management and budget. Copies of this publication are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, or may be obtained for personal use from the superintendent of documents, U.S. government printing office, Washington, D.C., 20402.

(135) "Startup" means the setting in operation of an affected facility or its emission control equipment for any purpose which produces emissions.

(136) "Submerged fill pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is 15.2 centimeters (6 inches) above the tank bottom.

(137) "Surface coating" means the application of a coating to a product in a coating line. Application of architectural coatings and road surfacing material is not included.

(138) "Three-piece can side-seam spray" means a coating sprayed on the exterior and interior of a welded, cemented or soldered seam to protect the exposed metal.

(139) "Topcoat" means the final film of coating applied in a multiple coat operation.

(140) "Total reduced sulfur (TRS)" means any sulfur containing compound in which the oxidation state of sulfur is less than zero. Common examples of such compounds are hydrogen sulfide, mercaptans, and dimethyl disulfide.

(141) "Traffic volume" means the number of vehicles that pass a particular point on the roadway during a specific time period. Volume can be expressed in terms of daily traffic or annual traffic as well as on an hourly basis.

(142) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, *Evaporation Loss from Floating Roof Tanks,* 1962.

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

(144) "Two-piece can exterior end coating" means a coating applied by roller coating or spraying to the exterior end of a can to provide protection to the metal.

(145) "Uncombined water" means water not chemically or physically bound to another materials.

(146) "Vacuum producing system" means any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes suction from a pressure below atmospheric and discharges against atmospheric pressure.

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

(148) "Vapor collection system" means, for the purpose of liquid organic compound transfer operations, a vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system.

(149) "Vapor recovery or control system" means a system that gathers organic compound vapors released during the operation of any transfer, storage, or process equipment and processes the vapors so as to prevent their emission into the ambient air.

(150) "Vinyl coating" means applying a decorative or protective topcoat or printing on vinyl coated fabric or vinyl sheets.

(151) "Volatile organic compound (VOC)" means any compound of carbon that has a vapor pressure greater than 0.1 millimeter of mercury

(0.0019 pounds per square inch absolute) at standard conditions, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(152) "Wastewater (oil/water) separator" means any device or piece of equipment which utilizes the difference in density between oil and water to remove oil and associated chemicals from water. This includes any device, such as a flocculation tank, clarifer, etc., which removes petroleum derived compounds from wastewater.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72, renum. (41) (a) 6 to be (41) (c); am. (41) (c) 3. and 4., Register, December, 1972, No. 204, eff. 1-1-73; r. and recr., Register, June, 1975, No. 234, eff. 7-1-75; renum. (3) (b) and (c) to be (3) (c) and (d), renum. (3) (a) 3. to be (3) (b) and am., am. (38) (intro.), Register, April, 1977, No. 256, eff. 5-1-77; r. and recr., Register, July, 1979, No. 283, eff. 8-1-79; cr. (126m), Register, September, 1979, No. 285, eff. 10-1-79.

NR 154.02 Applicability, delayed compliance, variances. (1) APPLICABILITY. The provisions of this chapter govern the release of air contaminants to the ambient air and the regulation of air contaminant sources by the department.

(2) DELAYED COMPLIANCE ORDERS. The department may, by order issued under s. 144.35 (1) (b), [144.423 (1) (b)] Stats., authorize a source not in compliance with an emission limitation prescribed in this chapter to achieve compliance as expeditiously as practicable but not later than 3 years after such requirement became applicable. The department shall hold a public hearing in accordance with its rules prior to authorizing any period of delayed compliance which exceeds 30 days in duration. No such order shall be issued unless:

(a) The cause of the violation was a malfunction, equipment failure, act of God, or some other condition beyond the entity's control, when using all prudent planning;

(b) The air contaminant source is located so that it will not delay attainment or affect maintenance of an ambient air quality standard at any point beyond the property line of the entity;

(c) Good faith efforts have been made to comply with this chapter;

(d) If the violation was caused by a malfunction or equipment failure, any plan required to be prepared by NR 154.06 (9) was compiled with;

(e) The air contaminant for which a deferral is sought is not a hazardous pollutant for which an emission standard has been established by the administrator of the U.S. environmental protection agency;

(f) The conditions listed in NR 154.09 (1), if applicable, are met;

(g) The order contains:

1. An express provision whereby the order recipient consents to its issuance;

2. A requirement that the order recipient employ reasonable emission monitoring techniques to assess compliance with any interim requirements imposed by the order;

3. A requirement for submittal of reports showing whether any interim requirements, increments of progress, and final compliance have been achieved;

4. A provision prohibiting the reduction of employe wages where supplemental, intermittent or other dispersion-dependent control methods are to be used;

5. In the case of a major stationary source, a notice that it may be required to pay administrative noncompliance penalties for failure to comply with the order and that no order issued under this subsection shall be effective until it is approved by the administrator of the U.S. environmental protection agency or designee.

(h) All reasonably available alternative operating procedures and interim control measures to minimize emissions shall be utilized by the air contaminant source during the period of delayed compliance.

(3) RACT VARIANCES. (a) The department may grant source-specific revisions to the state implementation plan setting alternate compliance schedules or alternate emission limitations, or both, where compliance with general RACT requirements of this chapter are shown to be technologically or economically infeasible, provided that:

1. The revision will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

2. Construction or modification of the air contaminant source for which a revision is requested was commenced on or before October 1, 1979.

3. The owner or operator of the air contaminant source for which a revision is requested demonstrates that all direct or portable sources owned or operated in the state by such person are in compliance with all applicable requirements of this chapter or are on a schedule for compliance with such requirements.

4. The owner or operator submits to the department information concerning the conditions or special circumstances which demonstrates, to the department's satisfaction, that the applicable general RACT requirements from which variance is sought are technologically or economically infeasible. In addition,

a. Where an alternate compliance schedule is sought, the owner or operator shall submit a proposed schedule which demonstrates reasonable further progress and contains a date for final compliance as soon as practicable.

b. Where alternate emission limitations are sought, the owner or operator shall submit proposed emission limitations.

c. Requests for revisions shall be signed by the principal executive officer; partner; sole proprietor; or principal governmental executive or elected official or a duly authorized representative, as appropriate.

d. Requests shall contain other relevant information as required by the department.

(b) The department, in acting upon any request for a revision under this subsection, shall:

1. Act on requests for revisions within 3 months of the filing of a completed request.

2. Offer, through public notice, the opportunity for public comment including, where requested, a public hearing.

3. State in writing the reasons for denying, granting, or for granting in modified form any request.

(c) The department may, after notice and opportunity for hearing, revoke or modify any revision when:

1. Any term or condition of the revision has been violated;

2. Changes in ambient air quality indicate that the source has a significant adverse impact on the attainment or maintenance of any ambient air quality standard; or

3. The owner or operator did not act in good faith in demonstrating the technological or economic infeasibility of compliance with the general RACT requirements or in submitting other relevent information in support of the revision request.

(d) When the department grants, modifies or revokes a source-specific revision to a general RACT requirement which has been approved by the administrator of the U.S. environmental protection agency as part of the state implementation plan, such revision shall not become effective until:

1. It has been submitted to the administrator pursuant to applicable law, including but not limited to 42 U.S.C. 7410, as amended, and 40 CFR Parts 51 and 52, as amended, and all such requirements have been met, and

2. It has been approved by the administrator or designee as a revision to the state implementation plan.

(4) ALTERNATE FUEL VARIANCES. The department may grant temporary variances from the emission limitations of this chapter to air contaminant sources which request such variances in order to switch from a regular fuel to an alternate fuel which is in more plentiful supply, provided that the conditions of this subsection are met.

(a) If the office of state planning and energy has certified that a switch from the fuel regularly used by the applicant to an alternate fuel would cause an emission limitation to be exceeded is needed to protect public health, safety or welfare in the applicant's part of the state, the department may grant a temporary variance from such requirements provided that:

1. The applicant has submitted a list of steps which will be implemented without delay to minimize adverse effects caused by the switch in fuels permitted by the variance, including all feasible steps to minimize use of the alternate fuel through energy conservation and other measures; and

2. The applicant has provided, or has agreed to provide within 5 days after the date the variance is granted, information on the type, quantity and quality of fuel and rate of consumption in use before and to be used after the switch in fuels; and

3. Granting the variance would be unlikely to cause or exacerbate a violation of any primary ambient air quality standard; and

4. Litigation for violation of an emission limitation prescribed in this chapter or an ambient air quality standard prescribed in chapter NR 155, Wis. Adm. Code, is not presently pending; and

5. The applicant has agreed to submit no later than 90 days from the date that the variance is granted a plan and time schedule for preventing the recurrence of the conditions which necessitated a variance request; and

6. The applicant submitted and implemented in good faith any plan required to be submitted as a condition to a previously-granted variance; and

7. After July 1, 1978, if the applicant uses natural gas or distillate oil as a regular fuel, the applicant has submitted and received department approval of a plan to minimize dependence on these fuels while complying with the emission limitations of this chapter.

(b) If the office of state planning and energy has not certified that a switch in fuels is needed, the department may grant a temporary variance from the emission limitations of this chapter only if the conditions of sub. (4) (a) 1. through 7. are met and the applicant has submitted documentation of the unavailability of the fuel regularly used and of any alternate fuel which the air contaminant source has the capability to burn in compliance with emission limitations.

(c) When granting a variance is likely to cause a secondary standard (but not a primary standard) to be violated or exacerbated, the following conditions shall apply:

1. The variance must specify an expiration date no later than 45 days from the date the variance is granted.

2. Prior to granting a variance extension which expires on a date more than 45 days after the date the variance was originally granted, the department shall:

a. Determine either that the applicant's regular fuel is unavailable or that certification by the office of state planning and energy of the need for a switch in fuels in the applicant's part of the state remains in effect; and

b. Evaluate through ambient air quality monitoring and/or dispersion modeling the air quality impact of granting the variance and determine that maintenance of the primary standards is not being endangered; and

c. Solicit and consider public comment on permitting the extension.

(d) When granting a variance is unlikely to cause any ambient air quality standard to be violated, the following conditions shall apply:

1. The variance must specify an expiration date no later than 60 days from the date the variance is granted.

2. Prior to granting a variance extension which expires on a date more than 60 days after the date the variance was originally granted, the department shall:

a. Determine either that the applicant's regular fuel is unavailable or that certification by the office of state planning and energy of the need

for a switch in fuels in the applicant's part of the state remains in effect; and

b. Evaluate through ambient air monitoring and/or dispersion modeling the air quality impact of granting the variance. If the evaluation indicates that maintenance of the air standards is not being endangered, an extension may be granted. If the evaluation indicates that a secondary air standard has been or may be violated, the procedure set forth in sub. (4) (c) 2. shall apply.

(e) The department may rescind or amend a variance granted under NR 154.02(4) at any time.

(5) The issuance or granting of any order or variance under subs. (2), (3) or (4) shall not relieve any person of the duty to comply with all other applicable federal, state and local laws and rules.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am., cr. (2) and (3), Register, June, 1975, No. 234, eff. 7-1-75; cr. (2) (d), Register, July, 1975, No. 235, eff. 8-1-75; cr. (4), Register, November, 1977, No. 263, eff. 12-1-77; am. Register, September, 1979, No. 285, eff. 10-1-79.

NR 154.03 Nonattainment areas; sources affected. (1) NONATTAINMENT AREAS. The department may, from time to time, issue documents defining, listing or describing any area of the state where it has determined that any ambient air quality standard for any air contaminant is not being met.

(2) SOURCES AFFECTED. Upon issuing documents under sub. (1), the department shall also issue documents identifying, listing or describing air contaminant sources located in or near nonattainment areas, the location or impact of whose emissions require such sources to comply with RACT emission limitations specified in NR 154.11 or NR 154.12.

(3) The impact of a source's emissions on a nonattainment area shall be determined by the department, using methods including but not limited to ambient air monitoring and meteorological data, and diffusion modeling.

(4) The failure to identify, in a document issued under sub. (2), a specific source in or near a nonattainment area which is otherwise subject to RACT emission limitations shall not relieve such source from compliance.

(5) The department may issue or revise a document under sub. (1) or (2) only after 30 days notice and public hearing in the region affected. Such hearings shall not be contested cases under s. 227.01(2), Stats.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. Register, June, 1975, No. 234, eff. 7-1-75; r. and recr. Register, September, 1979, No. 285, eff. 10-1-79.

NR 154.04 Notice of intent. (1) No person shall cause, suffer, allow or permit the construction of a new stationary source, or the addition to, relocation, modification, or replacement of an existing stationary source listed hereunder, without submitting in writing a notice of intent to the department, containing the information required by NR 154.04(3), prior to commencing construction or modification of said source. A notice of intent shall be submitted for any stationary source:

(a) Which can burn coal, coke or other solid fuel at a heat input rate greater than one million BTU per hour.

(b) Which can burn distilate oil (fuel oil), crude oil or residual oil at a heat input rate greater than 5 million BTU per hour.

(c) Which can burn gaseous fuel at a heat input rate greater than 30 million BTU per hour.

(d) Which can incinerate solid wastes at a rate greater than 50 pounds per hour (dry basis) or which can incinerate liquid wastes at a rate greater than 50 pounds per hour. Incinerators over 1,000 pounds per hour capacity are to be licensed under the solid waste management rules, Wis. Adm. Code chapter NR 151. A single submittal of a notice of intent to the department will be sufficient notification.

(e) Which produces carbon black, charcoal, detergent or soap, explosives, hydroflouric acid, nitric acid, paint, varnish, phosphoric acid, plastics, printing ink, sodium carbonate, sulfuric acid, sulfur dioxide, dehydrated alfalfa, dried corn, roasted coffee, feed and grain, fish meal, fertilizers, smoked meats and sausage, starch, primary metals, ferroalloys, metallurgical coke, cast metals, asphalt roofing, asphalt concrete, brick or clay products, calcium carbide, cement, ceramics, cleaned coal, concrete mix, desulfurized oil, fiberglass, frit glass, gypsum, lime, mineral wool, paperboard, perlite, paper pulp, phosphate rock, gravel, sand, stone, refined petroleum or petrochemical products, or wood products.

(f) Which emits asbestos, antimony, barium, beryllium, bromine, cadmium, chlorine, chromic acid, chromates, chromium, cobalt fume or dust, copper fume or dust, cyanides, fluorine, hydrogen chloride, hydrogen fluoride, iron (water soluble salts), lead, manganese, mercury, molybdenum, nickel carbonyl, nickel, nitric acid (including anhydrides), phosphoric acid including anhydrides, phosphorus (yellow), platinum (water soluble salts), selenium, sulfuric acid, thallium (water soluble compounds), tin, uranium, vanadium, pesticides, their mixtures, or their compounds. This section shall not apply to laboratories or water chlorination facilities.

(g) Which emits or may emit organic compounds at more than 15 pounds per day or more than 3 pounds per hour.

(h) Which can store more than 1,000 gallons of a photochemically reactive compound.

(i) Which can store more than 40,000 gallons of any organic compound.

(j) Which is an indirect source located in a standard metropolitan statistical area (SMSA) and which meets one of the following criteria:

1. Any new parking facility, or other new indirect source with an associated parking area, which has a parking capacity of 1,000 cars or more.

2. Any modified parking facility or any modification of an associated parking area which increases parking capacity by 500 cars or more.

3. Any new highway project with an anticipated annual peak hour traffic volume of 1,200 or more vehicles per hour within 10 years of construction.

4. Any highway modification project which will increase the annual peak hour traffic volume by 1,200 or more vehicles per hour within 10 years after modification.

(k) Which is an indirect source outside all SMSA's and which meets one of the following criteria:

1. Any new parking facility or other new indirect source with an associated parking area which has a parking capacity of 1,500 cars or more.

2. Any modified parking facility or any modification of an associated parking area which increases parking capacity by 750 cars or more.

3. Any new highway project which will carry 4 or more lanes of traffic and which has an anticipated annual peak hour traffic volume of 1,800 or more vehicles per hour within 10 years of construction.

4. Any highway modification project which will create an additional 2 or more lanes of traffic and which will increase the annual peak hour traffic volume by 1,800 or more vehicles per hour within 10 years after modification.

(l) Which is an airport, the construction or general modification program of which is expected to result in the following activity within 10 years of construction or modification:

1. New airport: 50,000 or more operations per year by regularly scheduled certificated air carriers, or use by 1,000,000 or more passengers per year.

2. Modified airport: Increase of 50,000 or more operations per year by regularly scheduled certificated air carriers over the existing volume of operations or increase of 1,000,000 or more passengers per year.

(m) Which exceeds one of the criteria in NR 154.04 (1) as a result of incremental growth. Where a stationary source is constructed or modified in increments which individually are not subject to review under this paragraph, all such increments occurring since the effective date of this rule or since the latest approval hereunder, whichever date is most recent, shall be added together for determining the applicability of this paragraph; or

(n) Which has uncontrolled emissions which exceed or are estimated to exceed 6 pounds per hour of any air contaminant or which causes objectionable odors. In those cases where this size limitation applies as well as another of the limitations above, the more restrictive limitation shall be used.

(2) The department shall respond within 15 days after receipt of a notice of intent which contains the information required by NR 154.04(3). This response shall contain either:

(a) A list of plans, specifications and other information needed to allow the department to initiate its analysis pursuant to NR 154.05 as to whether or not the proposed new source will be in accordance with applicable rules in force pursuant to ss. 144.30 to 144.46, 144.54 and 144.57, Stats.; or

(b) A notification that the notice of intent submitted contained sufficient information to allow the department to make a preliminary determination, pursuant to NR 154.05(1) (a), as to whether or not the source is in compliance with applicable air pollution control statutes and rules and that the procedures of NR 154.05 will proceed.

(3) A separate written notice of intent shall be submitted for each construction or modification project.

(a) For all stationary sources, said notice of intent shall include, but not be limited to:

1. The name, address and telephone number of the person submitting the notice of intent and the names (s) and address (es) of any other owner (s) and/or operator (s) of the facility.

2. A listing of all stationary sources associated with the facility.

3. A map showing the location and layout of the facility and adjacent streets, roads and property.

4. The expected dates when construction will commence, when emissions associated with the operation of the facility will begin, and when all aspects of the facility will be completed and open for business or fully operational; and

5. The estimated cost of the project.

(b) For direct sources, said notice of intent shall include, but not be limited to, in addition to the information required in subsection (3) (a) above:

1. Manufacturer of the equipment; model number and rated capacity.

2. Description of the process and a flow diagram.

3. Estimated composition and amounts of raw materials used.

4. Expected types, composition and amounts of fuel burned, including:

a. Heating values.

b. Sulfur content, percentage by weight.

c. Ash content, percentage by weight.

5. Operating schedule.

6. Information on any equipment to be used for measurement or control of emissions.

7. Stack height, temperature, exit diameter and exit velocity; and

8. Emission rates at rated capacity of particulate matter, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons, TRS or any toxic and hazardous materials.

(c) For indirect sources other than highway projects, said notice of intent shall include, in addition to the information required in subsection (3) (a) above:

1. A description of the proposed use of the site, including the normal hours of operation of the facility and the general types of activities to be operated therein; and

2. A site plan showing the location of associated parking areas, points of motor vehicle ingress and egress to and from the site and its associated parking areas and the location and height of buildings on the site.

(d) For airports, said notice of intent shall include, in addition to the information required in subsection (3) (a) above:

1. An estimate of the maximum number of aircraft operations per day by type of aircraft and an estimate of total passenger loadings during the first and tenth years after the expected date of completion; and

2. The information required under subsection (3) (c) above.

(e) For highway projects, said notice of intent shall include, in addition to the information required in subsection (3) (a) above:

1. An estimate of the annual peak hour traffic volume and annual average daily traffic volume expected during the first and tenth years after the expected date of completion.

2. An estimate of vehicle speeds for annual peak hour and annual average daily traffic volume conditions.

3. The maximum vehicle capacity of the highway project; and

4. A description of the general features of the highway project and associated right-of-way, and location of receptors along the right-of-way.

(4) Exemption from the requirement to submit a notice of intent does not relieve any persons from compliance with the emission limits of this chapter, the air quality requirements of Wis. Adm. Code chapter NR 155, or the reporting requirements of Wis. Adm. Code chapter NR 101.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr. Register, June, 1975, No. 234, eff. 7-1-75; am. (1), renum. (2) and (3) to be (3) and (4) and am., cr. (2), Register, April, 1977, No. 256, eff. 5-1-77.

NR 154.05 Action on applications. (1) Within 30 days after receipt of 2 copies of the plans, specifications and other information provided pursuant to s. 144.39 (1), Stats., needed to allow the department to analyze whether or not the source is in compliance with appropriate air pollution statutes and rules, or within 30 days after receipt of a notice of intent for construction of a source which does not require submittal of plans, specifications or other information, the department shall:

(a) Make a preliminary determination of whether the source should be approved, approved with conditions in accordance with subsections (9) or (10) of this section, or disapproved.

(b) Make available in at least one location in each region in which the source would be constructed a copy of all nonconfidential materials submitted by the owner or operator, a copy of the department's analysis and preliminary determination, and a copy or summary of other materials, if any, considered by the department in making its preliminary determination.

(c) Notify the applicants, interested members of the public, and appropriate federal, local and state officials of the proposed project, of the department's preliminary determination, and of the opportunity for public comment.

(d) Place a notice in a newspaper of general circulation in each region in which the source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator

and the department's preliminary determination on the approvability of the source.

(2) Public comments submitted in writing within 30 days after the date of said public notice shall be considered by the department in making its final decision on the application. The applicant may submit a written response to any comments submitted by the public no later than 10 days after the close of the public comment period. The department shall consider the applicant's response in making its final decision. All comments shall be made available for public inspection in at least one location in the region in which the source would be located.

(3) (a) The department shall take final action on the source after the close of the public comment period and after reviewing any response the applicant wishes to make to public comments. The department shall, by order, notify the owner or operator of the source in writing of its approval, conditional approval or disapproval of the proposed source. Said order must be issued within 30 days of the close of this public comment period and shall be made available for public inspection in at least one location in the region in which the source would be located. Construction may proceed only after an order granting approval or conditional approval has been received from the department and must proceed in accordance with the plans, specifications, and other information submitted and in accordance with any conditions imposed by the department.

(b) Notwithstanding any other provision appearing in this chapter, the department may not approve or disapprove any application until the department has discharged its duties under section 1.11, Wis. Stats.

(4) For a direct source, the department shall issue an order prohibiting construction if it determines that the affected facility will:

(a) Cause a violation of any control strategy of the state implementation plan.

(b) Cause or exacerbate a violation of any ambient air quality standard in any region or portion thereof.

(c) Degrade the air quality of the area sufficiently to prevent the construction of any other stationary source, for which plans are received by the department prior to the commencement of the plan review period for the affected facility, from being approvable under these rules.

(5) For an indirect source other than a highway project or an airport, the department shall issue an order prohibiting construction if it determines that the affected facility will:

(a) Cause a violation of any control strategy of the state implementation plan.

(b) Cause or exacerbate a violation of either ambient air quality standard for carbon monoxide in any region or portion thereof.

(c) Raise the carbon monoxide level in the area sufficiently to prevent the construction of any other stationary source, for which plans are received by the department prior to the commencement of the plan review period for the affected facility, from being approvable under these rules.

(6) For a highway project subject to this paragraph, the department shall issue an order prohibiting construction if it determines that the affected facility will:

(a) Cause a violation of any control strategy of the state implementation plan.

(b) Cause or exacerbate a violation of either ambient air quality standard for carbon monoxide in any region or portion thereof.

(c) Degrade the air quality along the highway corridor sufficiently to prevent construction of any other indirect source, for which plans are received by the department prior to the commencement of the plan review period for the affected facility, from being approvable under these rules.

(d) The determination pursuant to subsections (6) (b) and (c) of this section shall be made by evaluating the anticipated concentrations of carbon monoxide at nearby receptor or exposure sites which will be affected by the mobile source activity expected on the highway for the 10-year period following the expected date of completion, using traffic flow characteristic guidelines published by the U.S. environmental protection agency, appropriate atmospheric diffusion models, and/or any other reliable analytic method.

(e) For any new highway project with an anticipated average daily traffic volume of 50,000 or more vehicles per day within 10 years of construction or any highway modification project which will increase the average daily traffic volume by 25,000 vehicles per day or more within 10 years after modification, the department may require the following in addition to the requirements of subsection (6) (d) of this section for consideration in determining the approvability of the affected facility. The expected concentrations of carbon monoxide, photochemical oxidants and nitrogen dioxide shall be estimated for the 10-year period following completion of construction or modification using an areawide air quality analysis or other modeling technique approved by the department.

(7) For an airport subject to this paragraph, the department shall issue an order prohibiting construction if it determines that the affected facility will:

(a) Cause a violation of any control strategy of the state implementation plan.

(b) Cause or exacerbate a violation of either ambient air quality standard for carbon monoxide in any region or portion thereof.

(c) The determination pursuant to subsection (7) (b) of this section shall be made according to department guidelines. These guidelines may include the following:

1. All emissions from air contaminant sources at the airport, as well as emissions from the development of other new stationary sources expected to occur within 3 miles of the perimeter of the airport, will be added together in order to determine the aggregate impact on air quality for the 10-year period following the expected date of completion.

2. An areawide air quality analysis, or other modeling technique approved by the department will be used to determine the expected ambient concentration of carbon monoxide following construction or modification.

3. For highway projects and parking facilities specified under subsection (7) (c) of this section which are associated with airports, the applicable procedures specified in subsections (6) (d) and (e) of this section will be used.

(d) In addition to the requirements of subsection (7) (c) of this section, the department may require that an areawide air quality analysis or other modeling technique approved by the department be used to determine the expected ambient concentrations of photochemical oxidants and nitrogen dioxide following construction or modification for consideration in determining the approvability of the affected facility.

(8) The air quality impact of a proposed stationary source will be determined at such locations where people might reasonably be exposed for time periods consistent with the ambient air quality standards for the pollutants for which an analysis is carried out.

(9) Whenever a stationary source as proposed by an owner or operator's application would not be permitted to be constructed for failure to meet the tests set forth in subsections (4), (5), (6) or (7) of this section, the department may, instead of issuing an order prohibiting construction, grant a conditional approval which imposes reasonable conditions related to the air quality aspects of the proposed facility so that such facility, if constructed or modified in accordance with such conditions, could meet the tests set forth in subsections (4), (5), (6) or (7) of this section. For indirect sources, such conditions may include, but are not limited to:

(a) Binding commitments to roadway improvements or additional mass transit facilities to serve the facility secured by the owner or operator from governmental agencies having jurisdiction thereof.

(b) Binding commitments by the owner or operator to specific programs for mass transit incentives for the employes and patrons of the source.

(c) Binding commitments by the owner or operator to construct, modify or operate the facility in such a manner as may be necessary to achieve the traffic flow characteristics which have been determined not to cause violations of the national standards for carbon monoxide.

(10) Notwithstanding the provisions relating to modified stationary sources contained in NR 154.04 (1), the department may condition any approval by reducing the extent to which the facility may be further modified without resubmission for approval under this paragraph.

(11) Any owner or operator who fails to construct a stationary source in accordance with the application as approved by the department; any owner or operator who fails to construct and operate a stationary source in accordance with conditions imposed by the department under subsection (9) of this section; any owner or operator who modifies a stationary source in violation of conditions imposed by the department under subsection (10) of this section; or any owner or operator of a stationary

source subject to this section who commences construction or modification thereof after the effective date of these rules, without applying for and receiving approval hereunder, shall be considered in violation of this chapter.

(12) Approval to construct or modify a stationary source other than an airport or a highway section shall become invalid if construction or modification is not commenced within 24 months after the date when written approval was issued by the department. The department may extend such time period for up to 12 months on written request upon satisfactory showing that an extension is justified.

(13) Approval to construct or modify an airport shall become invalid if construction or modification is not commenced within 4 years after the date when written approval was issued by the department. The department may extend such time period for 2 years on written request.

(14) Approval to construct or modify for a highway project shall become invalid if construction or modification is not commenced within 6 years after the date when written approval was issued by the department. The department may extend such time period for up to 3 years on written request.

(15) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the emission limits of this chapter, the air quality standards of Wis. Adm. Code chapter NR 155 or the control strategies of all local, state and federal regulations which are part of the state implementation plan.

(16) The department may share review and public comment responsibilities for a source which is to be constructed by another agency of the state with such agency if the procedures followed by the agency fulfill the requirements of these subsections. Preliminary determination of the approvability of the source, evaluation of public comment on its air quality impact, and final approval or disapproval shall be the responsibility of the department.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr. Register, June, 1975, No. 234, eff. 7-1-75; r. (1), (2) renum. to be (1) and am., cr. (2), renum. (4) to (15) to be (5) to (16) renum. (3) to be (4), cr. (3), Register, April, 1977, No. 256, eff. 5-1-77; am. (4), Register, March, 1978, No. 267, eff. 4-1-78.

NR 154.055 Relocation of portable sources. (1) No person shall cause, suffer, allow or permit the relocation to a new site, without first meeting the requirements of this section, of a portable source:

(a) Which can burn coal, coke or other solid fuel at a heat input rate greater than one million BTU per hour.

(b) Which can burn distillate oil (fuel oil), crude oil or residual oil at a heat input greater than 5 million BTU per hour.

(c) Which can burn gaseous fuel at a heat input rate greater than 30 million BTU per hour.

(d) Which emits or may emit, with any emission control equipment inoperative more than 6 pounds per hour of any air contaminant or which causes objectionable odors. In those cases where this size limitation applies as well as another of the limitations above, the more restrictive limitation shall be used.

(2) For portable sources operating under a plan approval pursuant to NR 154.01 (3) (b), NR 154.04 and NR 154.05, relocation to a different site shall be approved, approved with conditions, or denied by the department in writing within 30 days after receipt of a completed site change form to be supplied by the department.

(3) The department shall approve relocation of a portable source if:

(a) The source meets the applicable emission limits.

(b) Operation at the proposed new site will not cause nuisance conditions.

(c) Operation at the new site will not cause a violation of any control strategy of the state implementation plan or cause or exacerbate a violation of any air quality standard.

(4) In applying for relocation approval an applicant may request approval of more than one site. If more than one site is approved, the portable source may be relocated from one approved site to another approved site without the submission of an additional site change form to the department. However, the department shall be notified of any such relocation to another approved site prior to the commencement of operations thereon.

History: Cr. Register, April, 1977, No. 256, eff. 5-1-77.

NR 154.06 Source reporting, recordkeeping, testing, inspection and operation. (1) NOTICE OF HAZARDOUS SUBSTANCE AIR SPILLS. (a) Persons possessing or controlling a hazardous substance shall immediately notify the department of any hazardous emission not in conformity with a permit or allowed by the department under this chapter. Notice shall be given as required by s. 144.76, Stats., and chapter NR 158, Wis. Adm. Code.

(2) REPORTING. (a) When requested by the department, a person shall furnish to the department information to locate and classify air contaminant sources according to the type, level, duration, frequency and other characteristics of emissions and such other information as may be necessary. The information shall be sufficient to evaluate the effect on air quality and compliance with these rules.

(b) The owner or operator of a source requested to submit information under par. (a) may subsequently be required to submit annually, or at such other intervals as specified by the department, reports detailing any changes in the nature of the source since the previous report and the total annual quantities of the air contaminants emitted.

(c) When requested by the department, the owner or operator of a source to which this chapter applies shall submit to the department a standard operating procedure which includes a detailed description of process and emission control equipment startup, operating and shutdown procedures designed to minimize emissions.

(d) When stack or performance tests required by the department are performed by a person other than the department, the test results shall be furnished to the department within 30 days unless the department provides, in writing, a 30-day extension of this deadline. Results of stack or performance tests submitted to the department shall include information from the instrumentation specified in sub. (5) taken at the time

of the tests, along with copies of the original data sheets, nozzle and stack diameter, weight of material sampled and other information needed to evaluate the stack or performance of tests.

(e) The department shall furnish a report of stack or performance tests or inspections it conducts to a representative of the source within 60 days after the testing or inspection is completed.

(f) Except where sub. (1) requires immediate notice of hazardous substance air spills, a person shall report to the department within 8 hours following the onset of a malfunction or other event not reported in advance to the department which causes or may cause any emission limitation, including the visual emission limit, to be violated. A person shall also report to the department emissions in excess of the emissions provided for in a plan approved pursuant to NR 154.09 (1) (b). The person shall report the cause and duration of the violation, the period of time considered necessary for correction, and measures taken to minimize emissions during the period.

(g) A person required to operate a continuous monitoring system or monitoring device shall notify the department within 1 week of any shutdown, breakdown, or malfunction of such device or system.

(h) A person shall report to the department in advance schedules for planned shutdown and startup of air pollution control equipment and the measure to be taken to minimize the down time of the control equipment. Scheduled maintenance or startup of other equipment which causes an emission limitation to be exceeded shall also be reported in advance to the department. Advance reporting under this paragraph shall not relieve any person from the duty to comply with any applicable emission limitation.

(3) RECORDKEEPING. (a) The owner or operator of any source to which this chapter applies shall maintain records of all testing and monitoring conducted under this section, records detailing all malfunctions which cause any applicable emission limitation to be exceeded, including logs to document the implementation of the plan required by sub. (9), records detailing all activities relating to any compliance schedule approved by the department under this chapter and any other records relating to the emission of air contaminants which may be requested in writing by the department.

(b) Copies of all records required under par. (a) shall be retained by the owner or operator for a period of 3 years or for such other period as may be specified by the department.

(4) ACCESS TO RECORDS. (a) No person shall deny information or access to records relating to emissions to an authorized representative of the department.

(5) METHODS AND PROCEDURES FOR SOURCE TESTING. (a) The department shall be notified 10 days in advance of stack or performance tests required by the department to afford it the opportunity to have a representative present to witness the testing procedures. Said notice shall provide a test plan which includes:

1. A description of the sampling equipment.

2. A description of the processes, operations, and equipment venting to the stack.

3. A description of process or operation variables which affect the air contaminant source's emissions.

(b) Sources of air contaminants other than volatile organic compounds. 1. The test plan required under par. (a) shall include, in addition to the information required under par. (a), a sketch or sketches showing the relative position and elevations of all processes or operations venting to the test stack and also the position of the sampling ports relative to the nearest upstream and downstream gas flow disturbance, and a cross-sectional sketch showing:

a. Stack configuration at the sampling location.

b. Sampling port locations.

c. Sampling point positions of each port.

2. The department may require: Provision for sampling ports, a safe work area for tests crews, safe access to the sampling platform, utilities for sampling and testing equipment, stack or performance tests performed by or under the direction of a qualified engineer or person with demonstrated ability in this field, instrumentation to monitor and record emission data, stack or performance tests performed in compliance with emission test guidelines developed by the department and submitted to the tester prior to the conducting of the test, or transfer of the test data sheets or sample collecting media to the department's witness for evaluation.

3. Performance tests or stack tests shall follow the guiding principles described in ASME performance test code 27 with a sampling train utilizing a velocity measuring probe during sampling and an integrating gas volume meter for existing direct or portable sources, or sampling methods required or approved by the United States environmental protection agency for direct or portable sources and for hazardous pollutants. Other sampling methods may be prescribed by the department or must have prior approval of the department.

Note: See american society of mechanical engineers performance test code 27, copyright 1957. Copies of PTC-27-1957 are available for inspection in the offices of department of natural resources, and secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from the American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.

(c) Volatile organic compound sources. 1. The owner or operator of any volatile organic compound source to which NR 154.13 applies shall demonstrate compliance by methods approved by the department.

2. The results of volatile organic compound emissions compliance testing shall only be accepted if prior notification has been supplied to the department as required under par. (a).

(6) INSTRUMENTATION FOR AIR POLLUTION CONTROL EQUIPMENT. (a) The department may require provisions for instrumentation to determine the efficiency of control equipment. Such instrumentation may include devices to measure voltage, or pressure drop across the control equipment; amperage, exhaust flow rates, or scrubbing solution flow

rates to, or in, the control equipment; temperature in the control equipment; or other information determined to be necessary by the department.

(7) ENTRY FOR INSPECTION. (a) No person shall deny entry at any reasonable time to an authorized representative of the department for purposes of inspection, or at any time when an air pollution episode condition exists or is believed imminent.

(8) CIRCUMVENTION. (a) No person shall cause, allow or permit the installation or use of any article, machine, equipment, process, or method, which conceals an emission which would otherwise constitute a violation of an applicable rule unless written approval has been obtained from the department. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance and the unnecessary separation of an operation into parts to avoid coverage by a rule that applies only to operations larger than a specified size.

(9) MALFUNCTION PREVENTION AND ABATEMENT PLANS. (a) The owner or operator of any direct or portable source which may emit hazardous substances or emits more than 15 pounds in any day or 3 pounds in any hour of any air contaminant for which air standards have been adopted shall prepare a malfunction prevention and abatement plan to prevent, detect and correct malfunctions or equipment failures which may cause any emission limitation to be violated or which may cause air pollution. The plan shall be in writing, updated as needed, and shall include:

1. Identification of the individual (s) responsible for inspecting, maintaining, and repairing the air pollution control equipment.

2. The maximum intervals for inspection and routine maintenance.

3. A description of the items or conditions that will be checked.

4. A listing of materials and spare parts that will be maintained in inventory.

5. An identification of the source and air pollution control equipment operation variables that will be monitored in order to detect a malfunction or failure; the correct operating range of these variables; and a description of the method of monitoring or surveillance procedures, or a reference to specific pages containing this information in manuals or other documents kept by the owner or operator.

6. A description of the corrective procedures that will be taken in the event of a malfunction or failure in order to achieve and maintain compliance with the applicable emission limitations as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistent with safe operating procedures.

7. Such other information as the department shall deem pertinent.

(b) The department may order any owner or operator to submit the plan required by par. (a) for review and approval. The department may amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions during malfunctions.

(c) No owner or operator shall fail to carry out a plan required under par. (a) or as amended under par. (b).

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr. (2), r. (3), renum. (4) to (6) to be (3) to (5), renum. (7) to be (6) and am., cr. (7), Register, June, 1975, No. 234, eff. 7-1-75; r. (2) (c), Register, April, 1976, No. 224, eff. 5-1-76; r. and recr. Register, September, 1979, No. 285, eff. 10-1-79.

NR 154.07 County and regional programs. Approved local programs must be compatible with these rules and the implementation plan, avoid duplication, and provide:

(1) Sufficient staff and resources to carry out the program.

(2) An air pollution control officer responsible for the program.

(3) Record keeping and reporting to the department of emission inventory, air quality monitoring, enforcement status, and other data on a standardized basis and in the form prescribed by the department.

(4) An agreement defining the responsibilities of the department and local agency to achieve an effective program.

(5) Countywide or regionwide enforcement of regulations involving:

(a) Open, backyard, and leaf burning.

(b) Ringelmann and opacity standards on stationary, semistationary, and mobile sources.

(c) Incinerators rated at or less than 50 pounds per hour of solid wastes (dry basis) or liquid wastes.

(d) Fugitive dust, odors, and other pollutants from sources other than those specified in section NR 154.04.

(e) Fugitive dust, odors, and other pollutants from sources specified in section NR 154.04, where authorized by the department.

(f) Zoning restrictions where air pollution considerations are involved.

(6) Consultation on traffic planning, approval, and implementation where air pollution considerations are involved, such as freeways, highway relocation and highway widening.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. (5) (c), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.08 Enforcement and penalties. Whenever the department has reason to believe these rules have been violated, it may issue a written notice, which may include an order.

(1) Within 10 days after the date of notice the aggrieved person may make a written request for a hearing.

(2) Penalties: Any person who violates this chapter, or who fails, neglects, or refuses to obey any general or special order of the department, shall forfeit not less than $10 nor more than $5,000, for each violation, failure, or refusal. Each day of continued violation is a separate offense. While the order is suspended, stayed, or enjoined, such penalty shall not accrue.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.

NR 154.09 Emissions prohibited. (1) No person shall cause, suffer, allow, or permit emissions into the ambient air in excess of the limits set in these rules, except:

(a) When an approved program or plan with a time schedule for correction has been undertaken and correction is being pursued with diligence.

(b) When emissions in excess of the limits are temporary and due to scheduled maintenance, startup, or shutdown of operations carried out in accord with a plan and schedule approved by the department.

(c) The use of emergency or reserve equipment needed for meeting of high peak loads, testing of the equipment, or other uses approved by the department. Such equipment must be specified in writing as emergency or reserve equipment by the department. Upon startup of this equipment notification must be given to the department which may or may not give approval for continued equipment use.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr. (1) (b) and (c), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.10 Limitations on open burning. (1) Open burning is prohibited with the following exceptions:

(a) Burning of brush or weeds on agricultural lands.

(b) Fires set for practice and instruction of firemen, or testing of fire fighting equipment.

(c) Backfires to control forest fires or fires set for forest or wildlife habitat management with approval of the department where no reasonable alternative is available.

(d) Burning of explosive or dangerous material for which there is no other safe means of disposal.

(e) Burning of small amounts of dry combustible rubbish (not to include wet combustible rubbish, garbage, oily substances, asphalt, plastic or rubber products) except where prohibited by local ordinance.

(f) Burning at rural or isolated solid waste disposal sites outside of the Southeast Wisconsin Intrastate AQCR that serve less than 2,500 people and are licensed to burn waste under section NR 151.18 of the solid waste disposal standards, or burning of special waste where permits are obtained from the department.

(g) Outdoor fires for cooking, ceremonies, or recreation.

(h) Burning of trees, limbs, stumps, brush or weeds for clearing or maintenance of rights-of-ways outside of the Southeast Wisconsin Intrastate AQCR.

(i) Burning of trees, wood, brush, or demolitions materials (excluding asphaltic, or rubber materials) by such methods approved by the department.

(j) Small open flames for welding, acetylene torches, safety flares heating tar, or similar applications.

(k) Burning of gaseous or liquid waste in a manner approved by the department.

(l) Burning of small amounts of dry leaves and dry plant clippings except where prohibited by local ordinance.

(2) All allowed open burning shall be conducted in a safe pollution free manner, when wind and weather conditions are such as to minimize adverse effects and in conformance with local and state fire protection regulations.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. (1) (f) and (k), renum. (1) (m) to be (1) (l), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.11 Control of particulate emissions. (1) GENERAL LIMITATIONS. No person shall cause, allow, or permit particulate matter to be emitted into the ambient air which substantially contributes to exceeding of an air standard, or creates air pollution.

(2) FUGITIVE DUST. No person shall cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. Nor shall a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions.

(a) Such precautions shall include, but not be limited to:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, or construction operations.

2. Application of asphalt, oil, water, suitable chemicals, or plastic covering on dirt roads, material stockpiles, and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor, or water pollution problem.

3. Installation and use of hoods, fans, and air cleaning devices to enclose and vent the areas where dusty materials are handled.

4. Covering or securing of materials likely to become airborne while being moved on public roads, railroads, or navigable waters.

5. Conduct of agricultural practices such as tilling of land or application of fertilizers in such manner as not to create air pollution.

6. The paving or maintenance of roadways or parking lots so as not to create air pollution.

(b) In addition, any direct or portable source in a primary or associated secondary nonattainment area identified under NR 154.03 (1) for suspended particulate matter; and any direct or portable source located near such areas whose aggregate fugitive dust emissions may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration), by the analysis under NR 154.03 shall meet the following RACT requirements:

1. Industrial and commercial private roadways and areas subject to traffic of more than 10 vehicles in any hour shall be paved with asphalt, concrete, or other surface approved by the department and shall be periodically cleaned in order to be kept free of loose material. Where paving is shown to be unreasonable, or where the roadway or area is to be used

for less than one year, dust shall be controlled by other methods approved by the department such as watering, chemical suppression, or stabilizers.

2. Storage piles having a material transfer greater than 100 tons in any year:

a. Storage piles of material having a silt content of 5% to 20% shall be treated with water, surfactants, stabilizers, chemicals; draped; or enclosed on a minimum of 3 sides. Access areas surrounding storage piles shall be watered, cleaned, or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

b. Storage piles of materials having a silt content of 20% or more shall be completely enclosed or draped except any part being worked, loaded or unloaded. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

3. Materials handling operations: a. Materials handling operations, including but not limited to crushing, grinding, mixing, screening, compacting, conveying, handling of waste material with more than 5% silt, and loading and unloading of railcar, truck, ship or barge shall have fugitive emissions controlled to 10% opacity when wind speeds are less than 25 miles per hour except that for 3 minutes in any hour, fugitive emissions may equal 50% opacity.

b. Any device used to control fugitive emissions from materials handling operations which has a discharge to the ambient air shall be controlled equal to or less than 0.1 pound of particulate matter per 1000 pounds of exhaust gas.

4. Process fugitive emissions: a. Any device used to control fugitive particulate emissions from processes which has a discharge to the ambient air shall be controlled to an exhaust gas concentration equal to or less than 0.1 pound particulate matter per 1000 pounds exhaust gas.

b. Emissions from any building or structure egress other than a stack shall be controlled such that visible emissions shall not exceed 10% opacity except for 3 minutes in any hour when fugitive emissions may equal 50% opacity.

c. Coking operations: 1) There shall be no visible emissions beyond 1 meter from the charging ports while coal is being charged to the oven except for a total of 125 seconds during 5 consecutive oven charges.

2) Fugitive emissions from pushing operations shall be captured by a travelling hood and controlled to not more than 0.08 pounds of particulate matter per 1000 pounds of exhaust gas. Any emissions escaping capture shall not exceed 20% opacity for each pushing operation.

3) There shall be no visible emissions from 90% of the doors of all coke ovens in use; 95% of all coke oven charging port lids; and 90% of all offtake piping except those open for charging, pushing, cleaning, and maintenance as determined by a one pass observation.

4) Quench towers for the application of water on hot coke shall be equipped with grit arrestors or equivalent equipment approved by the department. Water used in quenching shall not include coke by-product plant effluent.

(c) When a direct or portable source is subject to the emission limitations of par. (b) due to its location in or impact on a primary or associated secondary nonattainment area, the owner or operator shall not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under NR 154.03(1):

1. Submit plans for compliance within 8 months.

2. Award any necessary contracts within 15 months.

3. Commence construction, installation or modification of emission control techniques required under subd. 1., 2. and 3.a. of par. (b) within 18 months.

4. Commence construction, installation or modification of emission control techniques required under subd. 3.b. and 4. of par. (b) within 24 months.

5. Complete construction, installation or modification of emission control techniques required under subd. 1., 2. and 3.a. of par. (b), achieve compliance, and so certify to the department within 21 months.

6. Complete construction, installation or modification of emission control techniques required under subd. 3.b. and 4. of par. (b) within 30 months and achieve final compliance and so certify to the department within 33 months.

7. All direct or portable sources to which par. (b) applies which have been identified under NR 154.03(2) on or before April 1, 1980 shall achieve final compliance and so certify to the department on or before December 31, 1982.

(3) PARTICULATE EMISSION LIMITS FOR PROCESSES. No person shall cause, allow, or permit the emission of particulate matter to the ambient air from a direct or portable source involving a process in excess of the following limitations:

(a) All direct and portable sources on which construction or modification is commenced after April 1, 1972 shall meet the emission limitations of this paragraph.

1. Direct or portable sources other than those specified in subd. (3) (a) 2.; emissions in excess of:

a. Any process not otherwise covered by par. (3) (a): emissions calculated by the use of the equation, $E = 3.59\ P^{0.62}$ for process weight rates up to 60,000 pounds per hour; by use of the equation $E = 17.31\ P^{0.16}$ for process weight rates of 60,000 pounds per hour or more; (E is the allowable emissions in pounds per hour and P is the process weight rate in tons per hour) or in concentrations greater than those listed in NR 154.11(3) (b), whichever is more restrictive. Some examples of these calculations are given in the following table.

Process Weight Rate (Lbs/Hr.)	Emission Rate (Lbs/Hr.)
50	0.36
100	0.56
500	1.52
1,000	2.33
5,000	6.33
10,000	9.74
20,000	14.96
60,000	29.57
80,000	31.23
120,000	33.33
160,000	34.90
200,000	36.16
400,000	40.41
1,000,000	46.79

b. Cement kilns: 0.30 pounds of particulate per ton of feed to the kiln.

c. Cement clinker coolers: 0.10 pounds of particulate per ton of feed to the kiln.

2. Direct or portable sources specified hereunder on which construction or modification is commenced after February 1, 1975; emissions in excess of:

a. Asphalt concrete plants (any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing asphalt concrete; and the loading, transfer, and storage systems associated with emission control systems): 0.04 grains per dry cubic foot at standard conditions (90 milligrams per dry cubic meter at standard conditions).

b. Petroleum refineries (fluid catalytic cracking unit catalyst regenerators or fluid catalytic cracking unit incinerator-waste heat boilers):

1) 1.0 pound per 1,000 pounds (1.0 kilogram per 1,000 kilograms) of coke burn-off in the catalyst regenerator.

2) In those instances in which auxiliary liquid or solid fossil fuels are burned in the fluid catalytic cracking unit incinerator-waste heat boiler, particulate matter in excess of that permitted by subd. (a) 2.b.1) may be emitted to the atmosphere, except that the incremental rate of particulate emissions shall not exceed 0.10 pounds per million BTU (0.18 grams per million calories) of heat input attributable to such liquid or solid fuel.

c. Secondary lead smelters (blast or cupola furnaces and reverberatory furnaces): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

d. Secondary brass and bronze ingot production plants (reverberatory furnaces of 2.205 pounds or greater production capacity): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

e. Iron and steel plants (basic oxygen process furnaces): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

(b) All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this paragraph.

1. Direct or portable sources specified hereunder; emissions in excess of:

a. Cupolas melting more than 200 tons of metal in any year: 0.45 pounds of particulate matter per 1,000 pounds of gas.

b. Electric arc or induction furnaces: 0.1 pounds of particulate matter per 1,000 pounds of gas.

c. Open hearth furnaces: 0.2 pounds of particulate matter per 1,000 pounds of gas.

d. Basic oxygen furnaces: 0.1 pounds of particulate matter per 1,000 pounds of gas.

e. Sintering plants: 0.2 pounds of particulate matter per 1,000 pounds of gas.

f. Air melting furnaces: 0.3 pounds of particulate matter per 1,000 pounds of gas.

g. Heating or preheating furnaces: 0.3 pounds of particulate matter per 1,000 pounds of gas.

h. Blast furnaces: 0.2 pounds of particulate matter per 1,000 pounds of gas.

i. Asphalt, concrete, or aggregate mix plants: 0.3 pounds of particulate matter per 1,000 pounds of gas.

j. Cement kilns: 0.2 pounds of particulate matter per 1,000 pounds of gas.

k. Lime kilns: 0.2 pounds of particulate matter per 1,000 pounds of gas.

l. Cement clinker coolers: 0.3 pounds of particulate matter per 1,000 pounds of gas.

m. Grinding, drying, mixing, conveying, sizing, or blending: 0.2 pounds of particulate matter per 1,000 pounds of gas.

n. Grain processing or handling: 0.4 pounds of particulate matter per 1,000 pounds of gas.

o. Any other process not enumerated: 0.4 pounds of particulate matter per 1,000 pounds of gas.

(c) Any direct or portable source located in or near a primary or associated secondary nonattainment area identified under NR 154.03 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-

hour concentration) as determined by the analysis under NR 154.03 shall meet the following RACT emission limitations:

1. Sources on which construction or modification was commenced after April 1, 1972 shall not emit more than the emission limits of par. (3) (a) or 0.10 pounds of particulate matter per 1000 pounds of exhaust gas, whichever is more restrictive.

2. Sources on which construction or modification was commenced on or before April 1, 1972 shall not emit more than 0.10 pounds of particulate matter per 1000 pounds of exhaust gas.

(d) When a direct or portable source is subject to the emission limitations of par. (c) due to its impact on a primary or associated secondary nonattainment area, the owner or operator shall not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under NR 154.03 (1):

1. Submit plans for compliance within 6 months.

2. Award any necessary contracts within 12 months.

3. Commence construction, installation or modification of any emission control system within 24 months.

4. Complete construction, installation or modification of any emission control system within 30 months.

5. Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

6. All direct or portable sources to which par. (c) applies which have been identified under NR 154.03 (2) on or before April 1, 1980 shall achieve final compliance and so certify to the department on or before December 31, 1982.

(e) Notwithstanding par. (3) (c), any cupola may emit up to, but not more than 0.2 pounds of particulate matter per 1000 pounds of exhaust gas if, as of March 1, 1980, the cupola has an emission rate based on original design or equipment performance test conditions (whichever is more restrictive) which is 0.2 pounds of particulate matter per 1000 pounds of exhaust gas or less and the emission control system of such cupola has not been allowed to degrade more than 0.05 pounds of particulate matter per 1000 pounds of exhaust gas from the original design or equipment performance test conditions.

(4) PARTICULATE EMISSION LIMITS FOR FUEL BURNING INSTALLATIONS. No person shall cause, allow, or permit the emission of particulate matter to the ambient air from any indirect heat exchanger, power or heating plant, fuel-burning installation, or pulp recovery furnace with maximum heat input more than one million BTU per hour in excess of one of the following limitations:

(a) All installations on which construction or modification is commenced after April 1, 1972 shall meet the emission limitations of this paragraph.

1. Installations of 250 million BTU per hour or less except as provided in subd. 2. hereof; 0.15 pounds of particulate matter per million BTU input to any stack.

2. Installations of 100 million BTU per hour or less which are not located in the Southeast Wisconsin Intrastate AQCR and which burn only wood, or wood simultaneously with liquid or gaseous fossil fuel: 0.5 pounds of particulate matter per million BTU input to any stack except that installations located in subregion 1 of the Lake Michigan Intrastate AQCR shall meet the requirements of NR 154.11 (4) (b) 2.a.

3. Installations of more than 250 million BTU per hour: 0.10 pounds of particulate matter per million BTU input to any stack.

(b) All installations on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this paragraph.

1. Installations throughout the state shall meet the following emission limitations:

a. All installations: emissions determined by use of figure 2 of the ASME Standard number APS-1 with the maximum emission irrespective of stack height of 0.60 pounds of particulate matter per million BTU input to any stack.

Note: See american society of mechanical engineers standard number APS-1, second edition, November, 1968, copyright 1969. Copies of standard number APS-1 are available for inspection in the offices of department of natural resources, the secretary of state and revisor of statutes, Madison, Wisconsin and may be obtained for personal use from the American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.

2. Installations located in subregion 1 of the Lake Michigan Intrastate AQCR; in addition to meeting the emission limitations of subd. (4) (b) 1.a. of this section, these installations shall, by July 31, 1975, meet the following emission limitations:

a. All installations: emissions determined by use of figure 2 of the ASME Standard number APS-1 with the maximum emission irrespective of stack height of 0.30 pounds of particulate matter per million BTU input to any stack.

3. Installations located in the Southeast Wisconsin Intrastate AQCR, in addition to meeting the emission limitations of sub. (4) (b) 1.a., shall meet the following requirements:

a. Installations of 250 million BTU per hour or less (heat input of an installation shall follow ASME Standard number APS-1); maximum emission defined by the equation, $E = 0.3 - 0.0006I$ where I is heat input in millions of BTU per hour and E is maximum allowable particulate emissions in pounds per million BTU to any stack.

b. Installations of more than 250 million BTU per hour: maximum emissions of 0.15 pounds of particulate matter per million BTU input to any stack.

(c) All installations located in or near a primary or associated secondary nonattainment area identified under NR 154.03 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration) as determined by the analysis under NR 154.03 shall meet the following RACT emission limitations:

1. Installations of 100 million BTU per hour or less: maximum emission of 0.24 pounds of particulate matter per million BTU input to any stack.

2. Installations of more than 100 million BTU per hour: maximum emission of 0.10 pounds of particulate matter per million BTU input to any stack.

(d) When an installation is subject to the emission limitations of par. (c) due to its impact on a primary or associated secondary nonattainment area, the owner or operator shall not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under NR 154.03 (1):

1. Submit plans for compliance within 6 months.

2. Award any necessary contracts within 12 months.

3. Commence construction, installation or modification of any emission control system within 24 months.

4. Complete construction, installation or modification of any emission control system within 30 months.

5. Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

6. Notwithstanding the increments of progress specified in this paragraph, all installations to which par. (c) applies which have been identified pursuant to NR 154.03 (2) on or before April 1, 1980 shall achieve final compliance and so certify to the department on or before December 31, 1982.

(e) Notwithstanding subd. (4) (c) 2., any fuel burning installation of more than 250 million BTU per hour on which construction or modification was commenced on or before April 1, 1972 may emit up to, but not more than, 0.15 pounds particulate matter per million BTU if, as of March 1, 1980, the installation has an emission rate based on original design or equipment performance test conditions (whichever is more restrictive) which is less than 0.15 pounds per million BTU, and the emission control system of such installation has not been allowed to degrade more than 0.05 pounds per million BTU from the original design or acceptance performance test conditions.

(f) Notwithstanding subd. (4) (c) 1. or 2., any fuel burning installation of 250 million BTU per hour or less on which construction or modification was commenced on or before April 1, 1972 may emit up to, but not more than, an emission rate defined by the equation $E = 0.3 - 0.0006I$ (where I is the heat input in millions of BTU per hour and E is the maximum allowable particulate emissions in pounds per million BTU to any stack) if, as of March 1, 1980, the installation has an emission rate based on original design or equipment performance test conditions (whichever is more restrictive) which is less than the limit set by the above equation, and the emission control system of such installation has not been allowed to degrade more than 0.05 pounds per million BTU from original design or acceptance performance test conditions.

(5) PARTICULATE EMISSION LIMITS FOR INCINERATORS. No person shall cause, suffer, allow, or permit particulate matter, concentrations corrected to 12% carbon dioxide, to be emitted to the ambient air from any incinerator in excess of one of the following limitations:

(a) All incinerators on which construction or modification is commenced after April 1, 1972 shall meet the emission limits of this paragraph.

1. Incinerators other than those specified in (5) (a) 2. of this section; emissions in excess of:

a. Incinerators rated at 4,000 pounds of waste per hour or more: 0.15 pounds of particulate per 1,000 pounds of exhaust gas.

b. Incinerators rated at over 500 pounds of waste per hour and less than 4,000 pounds of waste per hour: 0.20 pounds of particulate per 1,000 pounds of exhaust gas.

c. Incinerators rated at 500 pounds of waste per hour or less other than prefabricated domestic incinerators below 5 cubic feet capacity: 0.30 pounds of particulate matter per 1,000 pounds of exhaust gas.

d. Prefabricated domestic incinerators below 5 cubic feet capacity shall not exceed the performance emission requirements prescribed by the United States of America Standards Institute for domestic incinerators, standard Z21.6.

e. United States of America Standards Institute Approval Requirements for Domestic Gas-Fired Incinerators, number Z21.6, approved December 28, 1966, copyright 1967. Copies of Approval Requirements Z21.6 are available for inspection in the office of department of natural resources, Pyare Square Building, and secretary of state and revisor of statutes, State Capitol, Madison, Wisconsin and may be obtained for personal use from American Gas Association, Inc., 605 Third Avenue, New York, N.Y. 10016.

2. Sewage treatment plant sludge and grit incinerators on which construction or modification is commenced after February 1, 1975; emissions shall not exceed 1.30 pounds per ton of dry sludge or grit input (0.65 grams per kilogram of dry sludge or grit input).

(b) All incinerators on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this paragraph.

1. Incinerators located throughout the state; emissions in excess of:

a. Incinerators rated at over 500 pounds of waste per hour: 0.50 pounds of particulate per 1,000 pounds of exhaust gas.

b. Incinerators rated at 500 pounds of waste per hour or less: 0.60 pounds of particulate per 1,000 pounds of exhaust gas.

2. Incinerators located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeast Wisconsin Intrastate AQCR; in addition to meeting the emission limits of (5) (b) 1. of this section these incinerators shall, by July 31, 1975, meet the following emission limits:

a. Incinerators of 5 cubic feet capacity or more: 0.30 pounds of particulate per 1,000 pounds of exhaust gas.

b. Prefabricated domestic incinerators below 5 cubic feet capacity shall not exceed the performance emission requirements prescribed by the United States of America Standards Institute for domestic incinerators, standard Z21.6.

(6) VISIBLE EMISSIONS. No person shall cause, suffer, allow, or permit emissions into the ambient air from any direct or portable source in excess of one of the following limitations: Where the presence of uncombined water is the only reason for failure to meet the requirements of this subsection, such failure shall not be a violation of this section.

(a) All direct and portable sources on which construction or modification is commenced after April 1, 1972 shall meet the emission limits of this paragraph. In addition, all direct and portable sources located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeast Wisconsin Intrastate AQCR on which construction or modification was commenced on or before April 1, 1972 shall, by July 31, 1975, meet the emission limits of this paragraph.

1. Direct or portable sources other than those specified in (6) (a) 2. of this section; emissions of shade or density greater than number 1 of the Ringelmann chart or 20 percent opacity with the following exceptions:

a. When combustion equipment is being cleaned or a new fire started, emissions not to exceed number 4 of the Ringelmann chart or 80 % opacity for 5 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day.

b. For stated periods of time, as permitted by the department, for such purpose as operating test, use of emergency or reserve equipment, or other good cause, provided no hazard or unsafe condition arises.

c. For direct or portable sources in operation on or before February 1, 1975, where performance test data taken concurrently with Ringelmann or opacity readings show the source to be in compliance with the emission limits but not the Ringelmann or opacity limits. In this case, Ringelmann or opacity limits shall be set at 0.5 Ringelmann or 10 % opacity above the average read during the stack test.

2. Direct or portable sources specified hereunder on which construction or modification is commenced after February 1, 1975; emissions of shade or density greater than:

a. Asphalt concrete plants (any combination of the following: dryers; systems for screening, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing asphalt concrete; and the loading, transfer, and storage systems associated with emission control systems): 20 percent opacity.

b. Petroleum refineries (fluid catalytic cracking unit catalyst regenerators and fluid catalytic cracking unit incinerator-waste heat boilers): 30 percent opacity, except for 3 minutes in any one hour.

c. Secondary lead smelters:

i. Blast or cupola furnaces and reverberatory furnaces: 20 percent opacity.

ii. Pot furnaces of more than 550 pounds (250 kilograms) charging capacity: 10 percent opacity.

d. Secondary brass and bronze ingot production plants:

i. Reverberatory furnaces of 2,205 pounds per hour (1,000 kilograms per hour) or greater production capacity: 20% opacity.

ii. Electric furnaces of 2,205 pounds per hour (1,000 kilograms per hour) or greater production capacity and blast or cupola furnaces of 550 pounds per hour (250 kilograms per hour) or greater production capacity: 10% opacity.

e. Sewage treatment plants (sewage sludge and grit incinerators): 20 percent opacity.

(b) All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this paragraph. Direct and portable sources located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeast Wisconsin Intrastate AQCR shall also meet the requirements of subsection (6) (a) of this section.

1. All direct or portable sources; emissions of shade or density equal to or greater than number 2 of the Ringelmann chart or 40% opacity. Exceptions listed in (6) (a) 1. of this section shall apply.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr. (3) to (6), r. (7), Register, June, 1975, No. 234, eff. 7-1-75; emerg. am. (4) (b) 3, eff. 12-3-75; am. (4) (a) 1. a. and (4) (b) 3. (intro.) r. and recr. (4) (b) 3. a., Register, April, 1976, No. 244, eff. 5-1-76; am. (4) (a), Register, November, 1976, No. 251, eff. 12-1-76; r. and recr. (1) to (4), Register, September, 1979, No. 285, eff. 10-1-79.

NR 154.12 Control of sulfur emissions. (1) GENERAL LIMITATIONS. No person shall cause, suffer, allow, or permit emission of sulfur or sulfur compounds into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution. The limitation on sulfur content of stand-by fuel is specified in section NR 154.16 and the limitation on total reduced sulfur from pulping operations is specified in section NR 154.18 (2).

(2) SULFUR LIMITATIONS. No person shall cause, suffer, allow, or permit sulfur dioxide to be emitted to the ambient air in amounts greater than:

(a) New or modified fossil fuel-fired steam generators rated at over 250 million BTU per hour:

1. Firing of liquid fossil fuel: 0.80 pounds of SO_2 per million BTU input.

2. Firing of solid fossil fuel: 1.2 pounds of SO_2 per million BTU input.

(b) New or modified sulfuric acid plants other than those utilized primarily as a means of preventing emission to the ambient air of sulfur dioxide or other sulfur compounds: 4.0 pounds of SO_2 per ton of acid produced.

(c) In the Southeast Wisconsin Intrastate AQCR installations of 250 million BTU per hour or less (heat input of an installation shall follow ASME standard number APS-1) in addition to meeting the emission limits of section NR 154.11 (4), Wis. Adm. Code, shall not burn coal with a sulphur content exceeding 1.11 pounds per million BTU in the coal.

(3) PETROLEUM REFINERIES. No person shall cause, suffer, allow or permit the release into the atmosphere or the burning of any fuel gas in an incinerator-waste heat boiler or process heater which contains greater than 0.10 grains of hydrogen sulfide (H_2S) per dry cubic foot at standard conditions (0.23 grams per dry cubic meter at standard conditions) unless the gases resulting from combustion are treated in a manner which prevents the release of sulfur dioxide to the atmosphere as effectively as controlling the concentration of H_2S in the fuel gas being burned.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72;cr. (3), Register, June, 1975, No. 234, eff. 7-1-75;cr. (2) (c), Register, April, 1976, No. 244, eff. 5-1-76.

NR 154.13 Control of organic compound emissions. (1) GENERAL LIMITATIONS. (a) No person shall cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

(b) No person shall cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic compounds, solvents or mixtures. Such precautions shall include, but are not limited to:

1. Use of caution to prevent spillage or leakage when filling tanks, trucks or trailers.

2. Use of caution when filling automobile tanks to prevent spillage.

(c) Disposal of volatile organic compound wastes. 1. Effective July* 1, [August 1,] 1979, no person shall cause, allow, or permit the disposal of more than 5.7 liters (1.5 gallons) of any liquid volatile organic compound waste, or of any liquid, semisolid or solid waste materials containing more than 5.7 liters (1.5 gallons) of any volatile organic compounds, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season. This includes, but is not limited to, the disposal of volatile organic compounds which must be removed from volatile organic compound control devices as so to maintain the control devices at their required operating efficiency.

2. Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of volatile organic compounds which evaporates into the ambient air does not exceed 15% (by weight) or 5.7 liters (1.5 gallons) in any one day, whichever is larger.

(2) STORAGE OF ORGANIC COMPOUNDS. (a) Storage of petroleum liquids. 1. Applicability. a. The storage, monitoring and maintenance requirements of subs. (2) (a) 2, 3 and 4 of this section apply to all storage vessels for petroleum liquids of more than 151,412 liter (40,000 gallon) capacity on which construction or modification is commenced after July 1, 1975, with the exception of:

1) Storage vessels being used for number 2 through number 6 fuel oils as specified in ASTM-D-396-73, gas turbine fuel oils numbers 2-GT

through 4-GT as specified in ASTM-D-2880-71, or diesel fuel oils numbers 2-D and 4-D as specified in ASTM-D975-73.

Note: See American Society for Testing and Materials, Part 17, 1973. Copies of applicable standards from Part 17; Petroleum Products - Fuels, Solvents, Burner Fuel Oils, Lubricating Oils, Cutting Oils, Lubricating Greases, Hydraulic Fluids; are available for inspection at the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from ASTM, 1916 Race Street, Philadelphia, PA 19103.

2) Storage vessels for the crude petroleum or condensate stored, processed and/or treated at a drilling and production facility outside a standard metropolitan statistical area prior to custody transfer.

3) Pressure vessels which are designed to operate at pressures in excess of 104 kilo Pascals (15 pounds per square inch gauge) without emissions except under emergency conditions.

4) Subsurface caverns or porous rock reservoirs.

5) Underground tanks if the total volume of petroleum liquids added to and taken from a tank annually does not exceed twice the volume of the tank.

b. Effective July 1, 1980, the maintenance requirements of subd. (2) (a) 4. apply to all storage vessels for petroleum liquids of more than 7,571 liter (2,000 gallon) capacity.

c. Effective July* 1, [August 1,] subd. (2) (a) 5 applies, subject to the provisions of sub. (9), to all fixed roof storage vessels with capacities greater than 151,412 liters (40,000 gallons) with the exception of those having capacities less than 1,600,000 liters (416,000 gallons) used to store crude petroleum and condensate prior to custody transfer.

2. Storage requirements. The owner or operator of any storage vessel to which this subdivision applies shall store petroleum liquids as follows:

a. If the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than 10.5 kilo Pascals (1.52 pounds per square inch absolute) but not greater than 77 kilo Pascals (11.1 pounds per square inch absolute), the storage vessel shall be equipped with a floating roof, a vapor recovery system or their equivalents.

b. If the true vapor pressure of the petroleum liquid, as stored, is greater than 77 kilo Pascals (11.1 pounds per square inch absolute) the storage vessel shall be equipped with a vapor recovery system or its equivalent.

3. Monitoring requirements. a. The owner or operator of any storage vessel to which this subdivision applies shall, for each such storage vessel, maintain a file of each type of petroleum liquid stored, the typical Reid vapor pressure of each type of petroleum liquid stored and the dates of storage. Dates on which the storage vessel is empty shall be indicated.

b. The owner or operator of any storage vessel to which this subdivision applies shall, for each such storage vessel, determine and record the average monthly storage temperature and true vapor pressure of the petroleum liquid stored at such temperature if:

1) The petroleum liquid has a true vapor pressure, as stored, greater than 3.5 kilo Pascals (0.51 pounds per square inch absolute) but less than 10.5 kilo Pascals (1.52 pounds per square inch absolute) and is stored in a vessel other than one equipped with a floating roof, a vapor recovery system or their equivalents; or

2) The petroleum liquid has a true vapor pressure, as stored, greater than 63 kilo Pascals (9.1 pounds per square inch absolute) and is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent.

c. The true vapor pressure shall be determined by the procedures in API Bulletin 2517. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the department requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, that Reid vapor pressure may be used. For other liquids, supporting analytical data shall be made available on request to the department when typical Reid vapor pressure is used.

Note: See American Petroleum Institute, Bulletin 2517 *Evaporation Loss from Floating Roof Tanks*, February, 1962. Copies of *Evaporation Loss from Floating Roof Tanks* are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from the American Petroleum Institute, 1801 K. Street, N.W., Washington, D. C. 20006.

4. Maintenance requirements. No person shall place, hold or store in a storage vessel any petroleum liquid which has a true vapor pressure as stored greater than 10.5 kilo Pascals (1.52 pounds per square inch absolute) unless:

a. Any tank surface exposed to the rays of the sun is painted and maintained white so as to prevent excessive temperature and vapor pressure increases; and

b. The seals of any floating roof are maintained so as to minimize emissions; and

c. All gauging and sampling devices are vapor-tight except when gauging or sampling is taking place.

5. No owner or operator of a fixed roof storage vessel to which this subdivision applies shall permit such storage vessel to be used for storing any petroleum liquid which has a true vapor pressure as stored greater than 10.5 kilo Pascals (1.52 pounds per square inch absolute), unless:

a. The vessel has been retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall; or

b. The vessel has been retrofitted with equally effective alternative control, approved by the department; and

c. The vessel is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and

d. All openings, except stub drains, are equipped with covers, lids, or seals such that;

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

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

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

e. Routine inspections are conducted through roof hatches at monthly intervals during the ozone season; and

f. A complete inspection of cover and seal is conducted whenever the tank is emptied, though not more frequently than at 6 month intervals nor less frequently than at 8 year intervals; and

g. Records are maintained that shall include:

1) The results of inspections conducted under (2) (a) 5.e. and f. of this section; and

2) The information required under sub. (2) (a) 3.

(b) Storage of photochemically reactive organic substances. 1. Applicability. a. Subdivision (2) (b) 2. applies to all storage tanks for photochemically reactive organic substances having capacities greater than 151,412 liters (40,000 gallons) in the Southeastern Wisconsin Intrastate AQCR, and to all such storage tanks throughout the state on which construction or modification is commenced after April 1, 1972. Where a provision of par. (2) (a) also applies, the more stringent requirement shall be met.

2. When storing photochemically reactive organic compounds, solvents or mixtures having a vapor pressure greater than 10.5 kilo Pascals (1.52 pounds per square inch absolute) at 21°C (70°F), floating roofs, vapor condensation systems, vapor holding tanks, or equally effective alternative control methods approved by the department shall be used.

(3) TRANSFER OPERATIONS. (a) Bulk gasoline terminals. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (3) (a) applies, subject to the provisions of sub. (9), to all bulk gasoline terminals and the associated equipment necessary to load tank truck or trailer compartments.

2. No person may load gasoline into any tank trucks or trailers from any bulk gasoline terminal unless:

a. The bulk gasoline terminal is equipped with a vapor control system which is properly installed, in good working order, in operation and consisting of one of the following:

1) An adsorber, absorption, refrigeration or condensation system; or

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

3) A control system demonstrated to have control effiency equivalent to or greater than 1) or 2) above and approved by the department; and

b. All displaced vapors and gases are vented only to the vapor control system; and

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

d. All loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected.

3. The vapor control system required under (3) (a) 2.a. shall not allow mass emissions of volatile organic compounds from control equipment to exceed 80 milligrams per liter (4.7 grains per gallon) of gasoline loaded.

4. Sources to which par. (3) (a) applies shall not:

a. Allow gasoline to be discarded in sewers or stored in open containers, par. (1) (c) notwithstanding; nor

b. Allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings.

(b) Bulk gasoline plants. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (3) (b) applies, subject to the provisions of sub. (9), to the loading and storage facilities of all bulk gasoline plants which have a 3 year average annual throughput of 1,330,000 liters (350,000 gallons) of gasoline or more; to the unloading, loading, and storage facilities of all bulk gasoline plants which have a 3 year average annual throughput of 3,800,000 liters (1,000,000 gallons) of gasoline or more; and to all delivery vessels involved in such loading or unloading operations, with the following exceptions:

1) The loading or unloading of stationary storage tanks with a capacity of 2,176 liters (575 gallons) or less, notwithstanding NR 154.06 (8).

2) Bulk plant unloading facilities, the delivery vessels receiving gasoline from bulk plants, and the operation of transferring gasoline from bulk plant to delivery vessel when the transfer takes place outside the counties of Brown, Calumet, Dane, Dodge, Fond du Lac, Jefferson, Kenosha, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago or when the gasoline is delivered exclusively to facilities exempted from the requirements of par. (3) (c) by (3) (c) 1.a. 2), 4), 5), 6) or 7). However, par. (3) (b) does apply if gasoline is transferred during the ozone season to a delivery vessel whose last previous delivery was to a gasoline dispensing facility (either inside or outside of Wisconsin) which is required to have a vapor balance system.

2. No owner or operator of a bulk gasoline plant shall permit stationary storage tanks to load or unload gasoline unless each tank is equipped with a vapor balance system as described under subd. (3) (b) 5. and approved by the department; and

a. Each tank is equipped with a submerged fill pipe approved by the department; or

b. Each tank is equipped with a fill line whose discharge opening is flush with or near the bottom of the tank.

3. No owner or operator of a bulk gasoline plant or delivery vessel shall permit the gasoline transfer operations regulated under par. (3) (b) unless each delivery vessel involved in such operations is equipped with a vapor balance system as described under subd. (3) (b) 5. and approved by the department; and

a. Equipment is available at the bulk gasoline plant to provide for the submerged filling of each delivery vessel; or

b. Each delivery vessel is equipped for bottom filling.

4. No owner or operator of a bulk gasoline plant or delivery vessel shall permit the transfer of gasoline unless:

a. Submerged or bottom filling is used; and

b. The vapor balance system is in good working order and is connected and operating; and

c. Delivery vessel hatches are closed at all times during transfer operations; and

d. There are no leaks in the delivery vessels' pressure/vacuum relief valves and hatch covers, nor in the delivery vessel tanks or stationary storage tanks or associated vapor and liquid lines during loading or unloading; and

e. The pressure relief valves on stationary storage tanks and delivery vessels are set to release at no less than 4.8 kilo Pascals (0.7 pounds per square inch gauge), or the highest possible pressure consistent with state or local fire codes or the national fire prevention association guidelines.

5. Vapor balance systems required under subds. (3) (b) 2. and 3. shall include vapor space connections on the stationary storage tank and on the delivery vessel with connecting pipe or hose. These connections are required either for loading of the bulk plant storage tank only or for both loading and unloading, as indicated in subd. (3) (b) 1. Both sides of all junctions shall be equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic compound vapors.

6. Notwithstanding sub. (1) (c), no owner or operator of a bulk gasoline plant shall permit gasoline to be spilled, discarded in sewers or stored in open containers.

(c) Gasoline dispensing facilities. 1. Applicability. a. Effective July,* [August 1,], 1979, sub. (3) (c) applies, subject to the provisions of sub. (9), to gasoline dispensing facilities, to the delivery vessels used to bring these facilities the gasoline which they dispense, and to the operation of transferring gasoline to the dispensing facilities with the following exceptions:

1) Gasoline dispensing facilities which are supplied exclusively by bulk gasoline plants whose unloading operations are exempted from the requirements of sub. (3) (b) by (3) (b) 1.a.

2) Gasoline dispensing facilities located outside the counties of Brown, Calumet, Dane, Dodge, Fond du Lac, Jefferson, Kenosha, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago.

3) Delivery vessels used exclusively to supply exempt gasoline dispensing facilities or used exclusively for the transfer operations exempted under 4) through 7) below.

4) Transfers made to storage tanks of gasoline dispensing facilities equipped with floating roofs or their equivalent which have been approved by the department.

5) Transfers made to any stationary storage tank at a gasoline dispensing facility with a capacity of 7,580 liters (2,000 gallons) or less which is in place on or before July* 1, [August 1,] 1979.

6) Transfers made to any stationary storage tank at a gasoline dispensing facility with a capacity of 2,176 liters (575 gallons) or less which is installed after July* 1, [August 1,] 1979.

7). Transfers made to stationary gasoline storage tanks with a capacity of 2,176 liters (575 gallons) or less used primarily for the fueling of agricultural equipment.

2. No owner or operator of a gasoline dispensing facility and no owner of a gasoline storage tank at such a facility shall transfer or cause or allow the transfer of gasoline from any delivery vessel into any stationary storage tank not excluded under sub. (3) (c) 1. unless the storage tank is equipped with a submerged fill pipe and the vapors displaced from it by filling are processed by a vapor control system in accordance with sub. (3) (c) 3.

3. A vapor control system required by sub. (3) (c) 2. shall include one or more of the following:

a. A vapor balance system with a vapor-tight vapor return line from the storage tank to the delivery vessel and a system that will ensure the vapor line is connected before gasoline can be transferred into the storage tank; or

b. A refrigeration-condensation system or equivalent capable of recovering at least 90% by weight of the organic compounds in the displaced vapor; or

c. A system demonstrated to have control efficiency equivalent to or greater than that provided under a. or b. above and approved by the department.

4. The operator of a delivery vessel shall not commence transfer of gasoline to any gasoline dispensing facility equipped with a vapor balance system pursuant to (3) (c) 3.a. without first properly connecting the vapor return line. The delivery vessel shall be designed, maintained and operated to be vapor tight at all times that it is vapor-laden.

5. During the ozone season, vapor-laden delivery vessels shall be refilled in Wisconsin only at:

a. Bulk gasoline terminals complying with sub. (3) (a); or

b. Bulk gasoline plants equipped with a vapor balance system for unloading as described in sub. (3) (b) 5.

6. Each owner of a gasoline storage tank or delivery vessel shall:

a. Install all necessary control systems and make all necessary process modifications in accordance with subds. 2., 3., 4. and 5. of sub. (3) (c); and

b. Repair, replace or modify any worn out or malfunctioning component or element of design, and keep such records as may be requested in writing by the department relating to the repair, replacement or modification of any component or element of design of the control system.

7. Each owner of a gasoline storage tank shall provide written instructions to the operator of the gasoline dispensing facility describing necessary maintenance operations and procedures for prompt notification of the owner in case of any malfunction of the control system.

8. Each operator of a gasoline dispensing facility shall:

a. Maintain and operate the control system in accordance with the specifications and the operating and maintenance procedures specified by the owner; and

b. Promptly notify the owner of the control system of any scheduled maintenance or of any malfunction requiring replacement or repair of major components of the system; and

c. Keep on the premise a copy of the instructions provided pursuant to subd. (3) (c) 7. and make these instructions available to an authorized representative of the department on request; and

d. Maintain such records on maintenance and malfunction as may be requested in writing by the department; and

e. Maintain gauges, meters, or other specified testing devices in proper working order.

(d) Transfer of photochemically reactive organic substances. 1. Applicability. a. Paragraph (3) (d) applies to transfer operations in the Southeastern Wisconsin Intrastate AQCR involving photochemically reactive organic compounds, solvents or mixtures having a vapor pressure greater than 10.5 kilo Pascals (1.52 pounds per square inch absolute) at 21°C (70°F), and to such transfer operations throughout the state at facilities on which construction or modification was commenced after April 1, 1972. Where a provision elsewhere in sub. (3) also applies, the more stringent requirement shall be met.

2. For transfers to storage tanks having greater than 3,785 liter (1,000 gallon) capacity, a permanent submerged fill pipe shall be used, provided such a tank does not have controls mentioned in subd. (2) (b) 2.

3. At facilities with over 151,412 liters (40,000 gallons) per day throughput, a vapor collection and disposal system, vapor collection adaptors and vapor-tight seal, or an underfill method with the top hatches partially closed or a means of creating a slight back pressure when loading tank trucks or trailers shall be used.

4. At facilities with 151,142 liters (40,000 gallons) or less per day throughput, the underfill method or a submerged fill pipe extending to within 6 inches of the tank bottom shall be employed when loading tank trucks or trailers.

(4) SURFACE COATING PROCESSES. (a) General applicability. 1. Subsection (4) applies to any facility which contains one or more of the surface coating processes described in this subsection which is located in the county of Brown, Calumet, Dane, Dodge, Fond du Lac, Jefferson, Kenosha, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha, or Winnebago or which has total emission of volatile organic compounds from the facility that are, or would be with any emission control equipment inoperative, more than 100 tons per year, with the following exceptions:

a. Surface coating process sources whose emissions of volatile organic compounds are less than or equal to 6.8 kilograms (15 pounds) in any one day, and less than or equal to 1.4 kilograms (3 pounds) in any one hour, provided the emission rates are determined and certified before September** 1, [October 1,] 1979 in a manner approved by the department.

b. Surface coating process sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance where:

1) The operation of the source is not an integral part of the production process; and

2) The emissions from the source do not exceed 363 kilograms (800 pounds) in any calendar month; and

3) The exemption is approved in writing by the department.

(b) Methods of compliance. 1. The surface coating emission limits under subds. (4) (c) 2., (4) (d) 2., (4) (e) 2., (4) (f) 2., (4) (g) 2., (4) (h) 2., (4) (i) 2. and (4) (j) 2. shall be achieved by:

a. The application of low solvent content coating technology; or

b. A vapor recovery system which recovers the solvent for reuse; or

c. Incineration or catalytic oxidation, provided that 90% of the nonmethane volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator or oxidation unit are oxidized to nonorganic compounds; or

d. An equivalent system demonstrated to reliably control emissions to a level at or below the applicable emission limit and approved by the department.

2. The design, operation, and efficiency of any capture system used in conjunction with (4) (b) 1.b., c. or d. shall be certified in writing by the owner or operator. The certification shall demonstrate that the applicable emission limit will be achieved. The capture system is subject to approval by the department.

(c) Can coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (c) applies, subject to the provisions of sub. (9), to coating applicator (s) and oven (s) of sheet, can or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish; two-piece can exterior (basecoat and overvarnish); two and three-piece can interior body spray; two-piece can exterior end (spray or roll coat); three-piece can side-seam spray and end sealing compound operations. Paragraph (4) (c) does not apply to sources exempted under par. (4) (a).

2. No owner or operator of a can coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of:

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

b. 0.51 kilograms per liter of coating (4.2 pounds per gallon), excluding water, delivered to each coating applicator from two- and three-piece

can interior body spray and two-piece can exterior end (spray or roll coat) operations,

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

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

(d) Coil coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (d) applies, subject to the provisions of sub. (9), to the coating applicator(s), oven(s) and quench area(s) of coil coating lines involved in prime and top coat or single coat operations. Paragraph (4) (d) does not apply to sources exempted under par. (4) (a).

2. No owner or opertor of a coil coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of 0.31 kilograms per liter of coating (2.6 pounds per gallon), excluding water, delivered to each coating applicator from prime and topcoat or single coat operations.

(e) Paper coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (e) applies, subject to the provisions of sub. (9), to the coating applicator(s), including but not limited to blade, air knife or roll coater(s), and drying oven(s) of paper coating lines. Paragraph (4) (e) does not apply to any piece of equipment on which a nonuniform coating is applied to a substrate, as in printing, or to sources exempted under par. (4) (a).

2. No owner or operator of a paper coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to each coating applicator from a paper coating line.

(f) Fabric and vinyl coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (f) applies, subject to the provisions of sub. (9), to the coating applicators, including but not limited to blade, roll, rotogravure or dip coater(s), and drying oven(s) of fabric and vinyl coating lines. Paragraph (4) (f) does not apply to sources exempted under par. (4) (a).

2. No owner or operator of a fabric coating line or a vinyl coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of:

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

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

(g) Automobile and light-duty truck manufacturing. 1. Applicability. a. Effective July* 1, 1979 [August 1,] 1979, par. (4) (g) applies, subject to the provisions of par. (9) (f), to the application area(s), flashoff area(s), and oven(s) of automobile and light-duty truck manufacturing plants involved in prime, topcoat and final repair coating of metallic front end and main body parts. Paragraph (4) (g) does not apply to the coating of wheels, trunk interiors, steering columns or nonmetallic parts;

to sealers or nonpriming anti-rust coatings; or to sources exempted under par. (4) (a).

2. No owner or operator of an automobile surface coating line which, prior to January 1, 1979, used an enamel coating system, shall cause, allow or permit the emission of any volatile organic compounds in excess of:

a. After December 31, 1983, 0.14 kilograms per liter of coating (1.2 pounds per gallon), excluding water, from an electrodeposition prime coat or equivalent coating line.

b. After December 31, 1982, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a spray primer-surfacer coating line.

c. After December 31, 1982, and until December 31, 1985, 0.45 kilograms per liter of coating (3.7 pounds per gallon), excluding water, from a topcoat coating line.

d. After December 31, 1985, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a topcoat coating line.

e. After December 31, 1982, 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, from any final repair coating line.

3. No owner or operator of an automobile surface coating line which, prior to January 1, 1979, used a lacquer coating system, shall cause, allow or permit the emission of any volatile organic compounds in excess of:

a. After July* 1, [August 1,] 1979, and until December 31, 1982, 0.27 kilograms per liter of coating (2.2 pounds per gallon), excluding water, from an electrodeposition prime coat coating line.

b. After December 31, 1982, 0.14 kilograms per liter of coating (1.2 pounds per gallon), excluding water, from an electrodeposition prime coat coating line.

c. After December 31, 1980, and until December 31, 1986, 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, from a spray primer-surfacer coating line.

d. After December 31, 1986, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a spray primer-surfacer coating line.

e. After December 31, 1979, and until December 31, 1981, 0.70 kilograms per liter of coating (5.8 pounds per gallon), excluding water, from a topcoat coating line.

f. After December 31, 1981, and until December 31, 1986, 0.61 kilograms per liter of coating (5.0 pounds per gallon), excluding water, from a topcoat coating line.

g. After December 31, 1986, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a topcoat coating line.

h. After July* 1, [August 1,] 1979, and until December 31, 1986, 0.79 kilograms per liter of coating (6.5 pounds per gallon), excluding water, from any final repair coating line.

i. After December 31, 1986, 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, from any final repair coating line.

4. No owner or operator of a light-duty truck surface coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of:

a. After January 1, 1981, and until December 31, 1982, 0.27 kilograms per liter of coating (2.2 pounds per gallon), excluding water, from an electrodeposition prime coat coating line.

b. After December 31, 1982, 0.14 kilograms per liter of coating (1.2 pounds per gallon), excluding water, from an electrodeposition prime coat coating line.

c. After December 31, 1980, and until December 30, 1987, 0.41 kilograms per liter of coating (3.4 pounds per gallon), excluding water, from a spray primer-surfacer coating line.

d. After December 31, 1987, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a spray primer-surfacer coating line.

e. After December 31, 1982, and until December 30, 1987, 0.44 kilograms per liter of coating (3.6 pounds per gallon), excluding water, from a topcoat coating line.

f. After December 30, 1987, 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, from a topcoat coating line.

g. After December 31, 1982, 0.58 kilograms per liter of coating (4.8 pounds per gallon), excluding water, from any final repair coating line.

5. Each emission limit in par. (4) (g) may be interpreted as a weighted daily average, or as an instantaneous arithmetic average of the colors in use, whichever is specified in an approved compliance plan. The emission limits are referenced to water-borne coatings conventionally applied. Any coating line which achieves an equivalent emission rate per unit area coated shall be deemed in compliance.

(h) Furniture metal coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (h) applies, subject to the provisions of sub. (9), to the application area(s), flashoff areas(s), and oven(s) of furniture metal coating lines involved in prime and topcoat or single coating operations. Paragraph (4) (h) does not apply to sources exempted under par. (4) (a).

2. No owner or operator of a furniture metal coating line shall cause, allow, or permit the emission of any volatile organic compounds in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, delivered to each coating applicator from prime and topcoat or single coat operations.

(i) Surface coating of large appliances. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (i) applies, subject to the provisions of sub. (9), to application area(s), flashoff area(s), and oven(s) of large appliance coating lines involved in single, prime, or topcoat coating operations. Paragraph (4) (i) does not apply to:

1) Sources exempted under par. (4) (a); or

2) The use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 0.95 liters (1 quart) in any one 8-hour period for any appliance coating line.

2. No owner or operator of a large appliance coating line shall cause, allow or permit the emission of any volatile organic compounds in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to each coating applicator from single, prime, or topcoat coating operations.

(j) Magnet wire coating. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (4) (j) applies, subject to the provisions of sub. (9), to the oven(s) of magnet wire coating operations. Paragraph (4) (j) does not apply to sources exempted under par. (4) (a).

2. No owner or operator of a magnet wire coating oven shall cause, allow or permit the emission of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to each coating applicator from magnet wire coating operations.

(5) USE OF ROAD SURFACING MATERIALS. (a) Cutback asphalts. 1. Applicability. a. Paragraph (5) (a) applies to the mixing, storage, use and application of cutback asphalts in Wisconsin. Paragraph (5) (a) does not apply to cutback asphalts intended for uses other than application to surfaces traversed by motor vehicles, bicycles or pedestrians.

2. The following restrictions apply to the mixing, open storage, use or application of cutback asphalts during the ozone season:

a. After July* 1, [August 1,] 1979, the use of rapid curing cutback asphalts shall not be permitted.

b. After May 1, 1980, the use of cutback asphalts for sealcoating operations shall not be permitted except where a single coat of liquid asphalt is applied to an aggregate base to control dust.

c. After May 1, 1981, the use of cutback asphalts shall not be permitted except for the aggregate base application allowed in (5) (a) 2.b., and for use as a penetrating prime coat during the first and last months of the ozone season.

(6) SOLVENT CLEANING OPERATIONS. (a) Solvent metal cleaning. 1. Applicability. a. Effective July* 1, [August 1,] 1979, par. (6) (a) applies, with a final compliance deadline of May 1, 1980, or as provided by a compliance schedule issued or approved pursuant to par. (9) (e), to cold cleaning, open top vapor degreasing and conveyorized degreasing operations.

b. Paragraph (6) (a) does not apply to individual cold cleaners to which not more than 5.7 liters (1.5 gallons) of solvent is added per day or to individual open top vapor or conveyorized degreasers whose emissions of volatile organic compounds are not more than 6.8 kilograms (15 pounds) in any one day, nor more than 1.4 kilograms (3 pounds) in any one hour, provided:

1) The degreaser is located outside the counties of Brown, Calumet, Dane, Dodge, Fond du Lac, Jefferson, Kenosha, Manitowoc, Milwaukee,

Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago; and

2) The emission rates from open top vapor and conveyorized degreasers are determined and certified before September** 1, [October 1,] 1979 in a manner approved by the department.

c. Paragraph (6) (a) also does not apply to sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance where:

1) The operation of the source is not an integral part of the production process; and

2) The emissions from the source do not exceed 363 kilograms (800 pounds) in any calendar month; and

3) The exemption is approved in writing by the department.

d. The requirements of (6) (a) 2.b through g. do not apply to cold cleaners with an open area smaller than 0.1 square meter (1.1 square feet).

e. The requirements of (6) (a) 3.c.2) and 4) do not apply to open top vapor degreasers with an open area smaller than 1.0 square meter (10.8 square feet).

f. The requirements of (6) (a) 4.c do not apply to conveyorized degreasers with an air/vapor interface smaller than 2.0 square meters (21.6 square feet).

2. Except as provided under (6) (a) 1.b., c., and d., the owner or operator of a cold cleaning facility shall:

a. Equip the cleaner with a cover; and

b. Design the cover so that it can be easily operated with one hand if:

1) The solvent volatility is greater than 2.1 kilo Pascals (0.3 pounds per square inch absolute) measured at 38°C (100°F); or

2) The solvent is agitated; or

3) The solvent is heated; and

c. Equip the cleaner with a facility for draining cleaned parts, and the drainage facility shall be constructed internally so that parts are enclosed under the cover while draining if the solvent volatility is greater than 4.3 kilo Pascals (0.6 pounds per square inch absolute) measured at 38°C (100°F), except that the drainage facility may be external for applications where an internal type cannot fit into the cleaning system; and

d. Install one of the following control devices if the solvent volatility is greater than 4.3 kilo Pascals (0.6 pounds per square inch absolute) measured at 38°C (100°F), or if the solvent is heated about 49°C (120°F):

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

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

3) Other systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the department; and

e. If used, supply a solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure which does not cause extensive splashing; and

f. Provide a permanent, conspicuous label, summarizing the operating requirements; and

g. Provide supervision or instruction adequate to ensure that the operation is conducted in accord with the following:

1) Close the cover whenever parts are not being handled in the cleaner; and

2) Drain the cleaned parts for at least 15 seconds or until dripping ceases; and

3) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another person in such a way as to cause greater than 15% of the waste solvent (by weight) to evaporate into the ambient air during the ozone season, par. (1) (c) notwithstanding; and

4) Repair solvent leaks immediately, or shut down the degreaser until the leaks are repaired.

3. Except as provided under (6) (a) 1.b.,c. and e., the owner or operator of an open top vapor degreaser shall:

a. Equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone; and

b. Provide the following safety switches:

1) A condenser flow switch or other switching system which shuts off the sump heat if the condenser coolant is either not circulating or too warm; and

2) A thermostatically activated control switch which shuts off the sump heat when the vapor level rises above the upper boundary of the normal range; and

3) A spray safety switch which shuts off the spray pump if the vapor level does not stay within the normal range; and

c. Install one of the following control devices:

1) A freeboard ratio equal to or greater than 0.75, with a powered or mechanically assisted cover if the degreaser opening is greater than 1.0 square meter (10.8 square feet); or

2) Refrigerated chiller; or

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

4) Ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (when cover is open), all passing through a carbon adsorption system which exhausts less than 25 parts per million of solvent averaged over one complete adsorption cycle; or

5) A control system demonstrated to have control efficiency equivalent to or greater than any of 1) through 4) above and approved by the department; and

d. Not position ventilation fans so as to disturb the degreaser's vapor zone, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area during the ozone season, unless necessary to meet OSHA requirements; and

e. Keep the cover closed at all times except when processing workloads through the degreaser; and

f. Always spray below the vapor level; and

g. Minimize solvent carryout by:

1) Racking parts to allow complete drainage; and

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

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

4) Tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and

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

h. Not degrease porous or absorbent materials, such as cloth, leather, wood or rope; and

i. Move parts out of the degreaser at less than 1.5 meters per minute (4.9 feet per minute) if the workload occupies more than 50% of the degreaser's open top area; and

j. Except where a load cannot be divided, avoid loading the degreaser to the point where the vapor level would drop more than 10 centimeters (4 inches) when the workload is placed in the vapor zone; and

k. Not operate the degreaser so as to allow water to be visually detectable in solvent exiting the water separator; and

l. Follow the requirements of (6) (a) 2.g.3) and 4); and

m. Provide a permanent, conspicuous label, summarizing the operating procedures of e. through l., and provide supervision or instruction adequate to ensure that the procedures are followed.

4. Except as provided under (6) (a) 1.b., c. and f., the owner or operator of a conveyorized degreaser shall:

a. Minimize entrance and exit openings during operations so that no opening dimension exceeds the smallest physically possible by more than 20 centimeters (8 inches) or by more than 20% of the opening dimension, whichever is smaller; and

b. Provide the following safety switches:

1) A condenser flow switch or other switching system which shuts off the sump heat if the condenser coolant is either not circulating or too warm; and

2) A thermostatically activated control switch which shuts off the sump heat when the vapor level rises above the upper boundary of the normal range; and

3) A spray safety switch which shuts off the spray pump or the conveyor if the vapor level does not stay within the normal range; and

c. Install one of the following control devices:

1) Refrigerated chiller; or

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

3) A system, demonstrated to have a control efficiency equivalent to or greater than 1) or 2), and approved by the department; and

d. Provide downtime covers for closing off the entrance and exit during shutdown hours; and

e. Place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhausts are shut down and not remove them until just before start-up; and

f. Minimize carryout emissions by:

1) Using a drying tunnel, rotating (tumbling) basket or their equivalent; and

2) Racking parts for best drainage; and

3) Maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute); and

g. Follow the requirements of (6) (a) 2.g.3) and 4) and (6) (a) 3.d. and k.

(7) PETROLEUM REFINERY SOURCES. (a) Vacuum producing systems. 1. Applicability. a. Effective July*1, [August 1,] 1979, par. (7) (a) applies, subject to the provisions of sub. (9), to vacuum producing systems at petroleum refining sources.

2. The owner or operator of any vacuum producing systems at a petroleum refinery shall not permit the emission of any noncondensible volatile organic compounds from the condensers or accumulators of the system.

3. The control required by subd. (7) (a) 2. shall be achieved by:

a. Piping the noncondensible vapors to an operating firebox or incinerator; or

b. Compressing the vapors and adding them to the refinery fuel gas.

(b) Wastewater separators. 1. Applicability. a. Effective July*1, [August 1,] 1979, par. (7) (b) applies, subject to the provisions of sub. (9), to wastewater separators at petroleum refining sources.

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

a. Provide covers and seals approved by the department on all separators and forebays; and

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

(c) Process unit turnarounds. 1. Applicability. a. Effective July*1, [August 1,] 1979, par. (7) (c) applies to process unit turnarounds at petroleum refining sources.

2. Notwithstanding sub. (9), before October***1, [November 1,] 1979 the owner or operator of a petroleum refinery shall develop and submit to the department for approval a detailed procedure for minimizing volatile organic compound emissions during process unit turnaround. As a minimun, the procedure shall provide for:

a. Depressurization venting of the process unit or vessel to a flare, firebox or vapor recovery system which prevents release to the ambient air of at least 90% by weight of the volatile organic compounds vented; and

b. No emission of volatile organic compounds from a process unit or vessel until its internal pressure is 136 kilo Pascals (19.7 pounds per square inch absolute) or less; and

c. Recordkeeping of the following items during the ozone season:

1) Every date that each process unit or vessel is shut down; and

2) The approximate total quantity of volatile organic compounds emitted and the duration of the emission.

(8) OTHER DIRECT SOURCES. (a) Process lines emitting photochemically reactive organic substances. 1. Applicability. a. Par. (8) (a) applies to all process lines in the Southeastern Wisconsin Intrastate AQCR which emit photochemically reactive organic compounds, solvents or mixtures, and to all such process lines throughout the state on which construction or modification was commenced after April 1, 1972. Where a provision elsewhere in this section also applies, the requirement which results in emission of the smallest quantity of volatile organic compounds shall be met.

2. Any process line, except enclosed paint spray booths and volatile organic compound water separation systems, which emits more than 6.8 kilograms (15 pounds) per day or 1.4 kilograms (3 pounds) per hour of a reactive organic compound, solvent or mixture shall control these emissions by at least 85%.

3. Any enclosed paint spraying operation which emits more than 13.6 kilograms (30 pounds) per day or 2.8 kilograms (6 pounds) per hour of a reactive organic compound, solvent or mixture shall control these emissions by at least 85%.

4. Any volatile reactive organic compound - water separation system that processes over 757 liters (200 gallons) per day shall control the emission of volatile organic substances by at least 85%.

(9) COMPLIANCE SCHEDULES. (a) Paragraphs (9) (b) through (9) (g) do not apply to sources which are in compliance with this section before July*1, [August 1,] 1979 and have determined and certified compliance to the satisfaction of the department on or before September**1, [October 1,] 1979.

(b) Process and emission control equipment installations. 1. Except as provided under par. (9) (e) and sub. (10), the owner or operator of a volatile organic compound emission source proposing to install and operate volatile organic compound emission control equipment or replacement process equipment to comply with the emission limiting requirements of this section shall not exceed the deadlines specified for the following increments of progress:

a. Final plans for the emission control system and/or process equipment shall be submitted on or before January 1, 1980.

b. Contracts for the emission control systems and/or process equipment shall be awarded or orders shall be issued for purchase of component parts to accomplish emission control on or before April 1, 1980.

c. Initiation of on-site construction or installation of the emission control and/or process equipment shall begin on or before September 1, 1980.

d. On-site construction or installation of the emission control and/or process equipment shall be completed on or before September 1, 1981.

e. Final compliance shall be achieved on or before October 1, 1981.

2. Any owner or operator of a source subject to the compliance schedule of subd. (9) (b) 1. shall certify to the department, within 7 days after the deadline for each increment of progress, whether the required increment of progress has been met.

(c) Low solvent content coating. 1. Except as provided under subds. (9) (c) 2. and 3., par. (9) (e) and sub. (10), the owner or operator of a volatile organic compound source proposing to employ low solvent content coating technology to comply with the requirements of this section shall not exceed the deadlines specified for the following increments of progress:

a. Final plans for the application of low solvent content coating technology shall be submitted on or before January 1, 1980.

b. Research and development of low solvent content coating shall be completed on or before October 1, 1980.

c. Evaluation of product quality and commercial acceptance shall be completed on or before February 1, 1981.

d. Purchase orders shall be issued for low solvent content coatings and process modifications on or before March 1, 1981.

e. Initiation of process modifications shall begin on or before May 1, 1981.

f. Process modifications shall be completed and use of low solvent content coatings shall begin on or before November 1, 1981.

g. Final compliance shall be achieved on or before December 1, 1981.

2. The owner or operator of a can coating or flexible packaging facility proposing to employ low solvent content coating technology to comply with the requirements of (4) (c) 2.d. or (4) (e) 2. may exceed each of the deadlines in (9) (c) 1.b. through g. by 12 months in developing acceptable can end sealing compounds or coatings for hydrophobic flexible packaging subtrates.

3. Where the deparment determines that low solvent content coating technology has been sufficiently researched and developed for a particular application, the owner or operator of a volatile organic compound source proposing to comply with the requirements of this section through application of low solvent content coatings shall not exceed the deadlines specified for the following increments of progress:

a. Final plans for the application of low solvent content coating technology shall be submitted on or before January 1, 1980.

b. Evaluation of product quality and commercial acceptance shall be completed on or before July 1, 1980.

c. Purchase orders shall be issued for low solvent content coatings and process modifications on or before September 1, 1980.

d. Initiation of process modifications shall begin on or before November 1, 1980.

e. Process modifications shall be completed and use of low solvent content coatings shall begin on or before April 1, 1981.

f. Final compliance shall be achieved on or before May 1, 1981.

4. Any owner or operator of a stationary source subject to one of the compliance schedules in par. (9) (c) shall certify to the department, within 7 days after the deadline for each increment of progress, whether the required increment of progress has been met.

(d) Equipment modification. 1. Except as provided under par. (9) (e) and sub. (10), the owner or operator of a volatile organic compound source proposing to comply with the requirements of this section by modification of existing processing equipment shall not exceed the deadlines specified for the following increments of progress:

a. Final plans for process modification shall be submitted on or before January 1, 1980.

b. Contracts for process modifications shall be awarded or orders shall be issued for the purchase of component parts to accomplish process modifications on or before March 1, 1980.

c. Initiation of on-site construction or installations of process modifications shall begin on or before June 1, 1980.

d. On-site construction of installation of process modifications shall be completed on or before December 1, 1980.

e. Final compliance shall be achieved on or before April 1, 1981.

2. Any owner or operator of a source subject to the compliance schedule of subd. (9) (d) 1. shall certify to the department, within 7 days after the deadline for each increment of progress, whether the required increment of progress has been met.

(e) Alternate compliance schedules. 1. Notwithstanding the deadlines specified in pars. (9) (b) through (9) (d), for any particular source the department may issue or approve a separate compliance schedule with earlier deadlines, if it finds that such a schedule would be feasible, or with later deadlines if it finds that those specified in pars. (9) (b) through (9) (d) would not be feasible. The alternate compliance schedule may be proposed by the owner or operator of a volatile organic compound source. If the alternate compliance schedule provides later deadlines, the following conditions shall be met:

a. A request for an alternate compliance schedule shall be received by the department on or before September**1, [October 1,] 1979.

b. Final control plans for achieving compliance with the requirements of this section shall be submitted on or before January 1, 1980.

c. The alternative compliance schedule shall include the same increments of progress as the schedule it is to replace.

d. Sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators shall be submitted by the owner or operator to justify the new deadlines proposed for the increments of progress.

2. All alternate compliance schedules proposed or promulgated under par. (9) (e) shall provide for compliance of the source with the requirements of subs. (2) through (7) as expeditiously as practicable but not later than December 31, 1982 or, where the owner or operator proposes to comply through development of a new surface coating which is subject to approval by a federal agency, not later than December 31, 1985.

3. Any schedule approved under par. (9) (e) may be revoked at any time if the source does not meet the deadlines specified for the increments of progress. Upon any such revocation the applicable schedule under pars. (9) (b) to (9) (d) shall be in effect.

(f) Phased emission reduction schedules. 1. Except as provided under sub. (10), the owner or operator of a source required to undertake a phased compliance program shall not exceed the following deadlines:

a. Plans for the program of phased compliance shall be submitted on or before August 1, 1980.

b. The compliance plan shall specify increments of progress with such deadlines as necessary to meet interim compliance dates specified in the applicable rule.

c. Final compliance shall be on or before the date specified in the applicable rule or approved compliance plan, but not later than December 31, 1987.

(g) Final compliance plans. 1. If the department finds any compliance plan submitted under sub. (9) to be unsatisfactory, it may require that the plan be resubmitted with appropriate revisions.

2. Where a source is subject to requirements of this section in effect prior to July*1, [August 1,] 1979, the source shall continue to comply with such requirements during the interim period prior to the final compliance date in the applicable compliance schedule.

3. Where a source is not subject to requirements of this section in effect prior to July*1, [August 1,] 1979, the final compliance plan shall specify reasonable measures to minimize emissions of volatile organic compounds during the interim period prior to the final compliance date.

(10) EXCEPTIONS AND DEFERRALS. (a) Exceptions for certain organic compounds. For sources on which construction or modification is commenced on or before July*1, [August 1,] 1979, the provisions of subs. (2) (b), (3) (d) and (8) (a) shall not apply to the use or application of insecticides, pesticides, herbicides, saturated halogenated hydrocarbons, perchloroethylene or acetone. In addition, none of the provisions of this section shall apply to the use or emission of trichlorotrifluoroethane (freon 113), ethane or methane.

(b) Internal offsets. 1. On or before December 31, 1987, no owner or operator of any surface coating facility shall cause or allow the emission of volatile organic compounds from any coating line to exceed the limitations contained in this section unless:

a. Each coating line which is involved in the internal offset is operating with an emission rate of volatile organic compounds less than or equal to the special emission rate for the coating line (which may be a weighted daily average) contained in a compliance plan approved under this paragraph;

b. The construction or modifiction of the coating line was commenced on or before July*1, [August 1,] 1979; and

c. The combined emission rate from all coating lines involved in the internal offset is less than or equal to an emission rate determined by the following equation: $E = A_1 \times B_1 + A_2 \times B_2 + \ldots A_n \times B_n$ where E = the total allowable emission rate from all of the coating lines involved in the internal offset in kilograms per hour (pounds per hour), $A_{1,2\ldots n}$ = the allowable emission rate for each coating line pursuant to sub. (4) in kilograms per liter (pounds per gallon) of coating, excluding water, delivered to the coating applicator, and $B_{1,2\ldots n}$ = the amount of coating material in liters per hour (gallons per hour), excluding water, delivered to the coating applicator; and

d. The owner or operator has certified, and the department has confirmed, that the emissions of all air contaminants from all existing sources owned or controlled by the owner or operator in the state are in compliance with or under a schedule for compliance as expeditiously as practicable with, all applicable local, state and federal laws and regulations.

2. The provisions of subd. 1. apply to a surface coating facility only after the department has approved a compliance plan which specifies an emission rate for each of the coating lines involved in the internal offset. If, at any time, the department determines that one of these emission rates is being exceeded, approval of the compliance plan may be revoked and subd. 1. shall no longer apply to the facility.

3. The compliance plan required under subd. 2. shall include a compliance schedule consistent with sub. (9). Notwithstanding subd. (9) (e) 2., the internal offset provided for in the compliance plan may remain in effect until December 31, 1987. After December 31, 1987, no owner or operator of any coating line shall cause or allow the emission of volatile organic material from the coating line to exceed any limitation contained in sub. (4).

(c) Compliance schedule delays. Notwithstanding any compliance schedule approved or issued under sub. (9), the department may approve a new compliance schedule which provides additional time for completion of an increment of progress, provided:

1. That the owner or operator of the source is able to document to the department's satisfaction that the source is unable to meet the applicable deadline under sub. (9) for said increment of progress due to circumstances beyond the owner or operator's control which could not reasonably have been avoided by using all prudent planning; and

2. That the additional time allowed for the said increment of progress does not exceed that originally allotted under sub. (9); and

3. That the final compliance date is not later than December 31, 1982, except as provided in (9) (f) 1.c. or sub. (10) (b) 3.

(d) Limitation of restrictions to the ozone season. Where the requirements of this section are met by means of a fossil-fuel fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of this chapter.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; r. and recr., Register, June, 1975, No. 234, eff. 7-1-75; am. Register, July, 1979, No. 283, eff. 8-1-79; am. (3) (c) 2. and 4., Register, August, 1979, No. 284, eff. 9-1-79.

NR 154.14 Control of carbon monoxide emissions. (1) GENERAL LIMITATIONS. No person shall cause, suffer, allow, or permit emission of carbon monoxide to the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

(2) CARBON MONOXIDE LIMITATIONS. No person shall cause, suffer, allow, or permit significant emissions of carbon monoxide from any new direct source not listed below to be emitted to the ambient air unless such emissions are incinerated at 1,300°F for 0.3 seconds, or reduced by some other means an equivalent amount. Such emissions shall include, but are not limited to, the exhaust from cupolas, blast furnaces, basic oxygen furnaces; or waste streams from petroleum fluid cokers or other petroleum processes. Compliance with these limitations shall be shown to the department on initial startup of the source.

(a) Petroleum refineries (fluid catalytic cracking unit catalyst regenerators): 0.050% carbon monoxide by volume, dry basis.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. (2) and cr. (2) (a), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.15 Control of nitrogen compound emissions. (1) GENERAL LIMITATIONS. No person shall cause, suffer, allow, or permit nitrogen oxides or nitrogen compounds to be emitted to the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

(2) NITROGEN OXIDES LIMITATIONS. No person shall cause, suffer, allow, or permit nitrogen oxides (expressed as NO_2) to be emitted to the ambient air in amounts greater than:

(a) New or modified fossil fuel-fired steam generators rated at over 250 million BTU per hour:

1. Firing of gaseous fossil fuel; 0.20 pounds of NO_2 per million BTU input.

2. Firing of liquid fossil fuel: 0.30 pounds of NO_2 per million BTU input.

3. Firing of solid fossil fuel: 0.70 pounds of NO_2 per million BTU input.

(b) New or modified weak nitric acid plants (acid 30 to 70% in strength:) 3.0 pounds of NO_2 per ton of acid produced.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.

NR 154.16 Use of standby fuel. (1) Use of standby fuel shall meet the following limitations:

(a) Visible emissions:

1. The limits in visible emission shall be the same as section NR 154.11 (7) (c) of these rules.

(b) *Particulate emission limits:*

1. No person while burning standby fuel shall cause, suffer, allow, or permit to be emitted to the ambient air particulate matter which substantially contribute to the exceeding of an air standard or create air pollution.

(c) *Sulfur emission limits:*

1. In the Southeast Wisconsin Intrastate Air Quality Control Region, no person shall cause, suffer, allow, or permit use of standby fuel with greater sulfur content than:

a. Coal: 1.50% (by weight as fired)

b. Residual Oil: 1.00%

c. Distillate Oil: 0.70%

2. Variance from the above sulfur limits may be granted by the department until July 1, 1975 or until existing fuel supplies are used.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. (1) (a) and (c), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.17 Control of motor vehicles, internal combustion engines, and mobile sources. (1) GENERAL LIMITATIONS. No person shall

cause, suffer, allow, or permit emissions of particulate matter, sulfur oxides, hydrocarbons, carbon monoxide, nitrogen oxides, or odors from a motor vehicle, internal combustion engine, or mobile source which substantially contribute to the exceeding of an air standard or create air pollution.

(2) CONTROL OF MOTOR VEHICLES. No person shall cause, suffer, allow, or permit the removal, dismantling, disconnection, disabling, or disrepair of any air pollution control device or system which has been installed on a motor vehicle or internal combustion engine. Such devices or systems include but are not limited to:

(a) Positive crank case ventilation system.

(b) Exhaust emission control devices.

(c) Evaporative fuel loss control systems.

(d) Any control device operating on principles such as thermal decomposition, catalytic oxidation or reduction, absorption, or adsorption.

(3) REQUIREMENTS. The following requirement applies to motor vehicles in the Southeast Wisconsin Intrastate AQCR.

(a) Gasoline powered on the road vehicles: inspection, and repair if necessary, for a gasoline-powered vehicle to be eligible for registration. Inspection and repair shall include:

1. Positive crankcase ventilation system.

2. Hosing on pollution control system.

3. Cleaning of air cleaner.

4. Setting of idle speed (manufacturer recommendation).

Next page is numbered 150-1

5. Setting of idle mixture (manufacturer recommendation on 1968 and later vehicles and best lean idle on all other).

(4) VISIBLE EMISSION LIMITS FOR MOTOR VEHICLES, INTERNAL COMBUSTION ENGINES, AND MOBILE SOURCES. No person shall cause, suffer, allow, or permit visible emissions in amounts greater than the following limitations, except when uncombined water is the cause for violation.

(a) Gasoline-powered internal combustion engines of 25 HP or more, or gasoline-powered motor vehicles: no visible emissions for longer than 5 consecutive seconds.

(b) Diesel-powered motor vehicles of model year 1970 or later: emissions of shade or density greater than number 1 on the Ringelmann chart or 20% opacity for longer than 10 consecutive seconds.

(c) Diesel-powered motor vehicles of model year 1969 or earlier: emissions of shade or density greater than number 2 on the Ringelmann chart of 40% opacity for longer than 10 consecutive seconds.

(d) Ships, locomotives, or semistationary diesel engines: emissions of shade or density greater than number 2 on the Ringelmann chart or 40% opacity for longer than an aggregate time of 5 minutes in any 30-minute period. At no time shall emissions exceed a shade or density greater than number 4 on the Ringelmann chart or 80% opacity.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.

NR 154.18 Malodorous emissions. (1) GENERAL LIMITATIONS. No person shall cause, suffer, allow, or permit emission into the ambient air any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventive measures satisfactory to the department are taken to abate, or control such emission.

(a) An odor shall be deemed objectionable when either or both of the following tests are met:

1. Upon decision resulting from investigation by the department, based upon the nature, intensity, frequency, and duration of the odor as well as the type of area involved and other pertinent factors.

2. Or when 60% of a random sample of persons exposed to the odor in their place of residence or employment, other than employment at the odor source, claim it to be objectionable and the nature, intensity, frequency, and duration of the odor are considered.

(b) Abatement or control requirements may include but are not limited to:

1. Use of catalytic incinerators, after burners, scrubbers, adsorbers, absorbers, or other methods approved by the department.

2. The removal and disposal of odorous materials.

3. The use of methods in handling and storage of odorous materials that minimize emissions.

4. The following of prescribed standards in the maintenance of premises to reduce odorous emissions.

5. Use of best available control technology to reduce odorous emissions.

(2) TOTAL REDUCED SULFUR LIMITATIONS. No person shall cause, suffer, allow, or permit emission into the ambient air of total reduced sulfur (TRS) in excess of the following limitations: all emission standards in this section are based on average daily emissions.

(a) The emission of TRS from all recovery furnace stacks shall not exceed one-half pound of sulfur (as sulfur) per equivalent ton of air-dried kraft pulp, or from each recovery furnace stack 17 and one-half ppm, expressed as hydrogen sulfide on a dry gas basis, whichever is the more restrictive. New direct sources shall meet such other limit of TRS that proves to be reasonably attainable utilizing the latest in design of recovery furnace equipment, controls, and procedures. All direct sources shall be in compliance with this requirement by not later than July, 1976.

(b) Noncondensibles from digesters and multiple-effect evaporators shall be treated to reduce the emission of TRS equal to the reduction achieved by thermal oxidation in a lime kiln. All existing direct sources shall be in compliance with this requirement by not later than July, 1973.

(c) No extensions beyond these time limits for implementation may be granted without formal application to the department which determines adequate justification.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; am. (1) (a) and (2), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.19 Control of hazardous pollutants. (1) GENERAL LIMITATIONS. No person shall cause, suffer, allow, or permit emissions into the ambient air of hazardous substances in such quantity, concentration, or duration as to be injurious to human health, plant or animal life unless the purpose of that emission is for the control of plant or animal life. Hazardous substances include but are not limited to the following materials, their mixtures, or compounds: asbestos, beryllium, cadmium, chromium, chlorine, fluorine, lead, mercury, pesticides, or radioactive material.

(2) HAZARDOUS POLLUTANT LIMITATIONS. Limitations of emissions of hazardous pollutants shall follow general or special orders issued by the department.

(3) No person shall cause, suffer, allow or permit emissions of mercury:

(a) In such quantity and duration as to cause the ambient air concentration to exceed 1 $\mu g/m^3$, averaged over a 30-day period;

(b) In quantities greater than 2,300 grams (5.07 pounds) per 24-hour period from mercury cell chlor-alkali plants, or mercury ore processing facilities.

(4) CONTROL OF ASBESTOS EMISSIONS. (a) Asbestos mills: There shall be no visible emissions to the outside air from any asbestos mill except as provided in paragraph (f) of this section.

(b) Roadways: The surfacing of roadways with asbestos tailings is prohibited except for temporary roadways on an area of asbestos ore deposits. The deposition of asbestos tailings on roadways covered with snow or ice is considered "surfacing."

(c) Manufacturing: There shall be no visible emissions to the outside air, except as provided in paragraph (f) of this section, from any building or structure in which asbestos manufacturing operations are conducted or directly from any such operations if they are conducted outside of buildings or structures. An asbestos manufacturing operation means the combining of commercial asbestos or, in the case of woven friction products, the combining of textiles containing commercial asbestos, with any other material(s), including commercial asbestos, and the processing of this combination into a product. Types of manufacturing operations include, but are not limited to:

1. The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap or other textile materials.

2. The manufacture of cement products.

3. The manufacture of fireproofing and insulating materials.

4. The manufacture of friction products.

5. The manufacture of paper, millboard and felt.

6. The manufacture of floor tile.

7. The manufacture of paints, coatings, caulks, adhesives and sealants.

8. The manufacture of plastics and rubber materials.

9. The manufacture of chlorine.

(d) Demolition: Any owner or operator of a demolition operation who intends to demolish any institutional, commercial or industrial building (including apartment buildings having more than 4 dwelling units), structure, facility, installation, or portion thereof, which contains any boiler, pipe or load-supporting structural member that is insulated or fireproofed with friable asbestos material shall comply with the requirements set forth in this paragraph.

1. Notice of intention to demolish shall be provided to the department at least 20 days prior to commencement of such demolition or any time prior to commencement of demolition subject to paragraph (d)3. of this section. Such notice shall include the following information:

a. Name of owner or operator.

b. Address of owner or operator.

c. Description of the building, structure, facility or installation to be demolished.

d. Address or location of the building, structure, facility or installation.

e. Scheduled starting and completion dates of demolition.

f. Method of demolition to be employed.

g. Procedures to be employed to meet the requirements of this paragraph.

2. The following procedures shall be used to prevent emissions of particulate asbestos material to outside air:

a. Friable asbestos materials used to insulate or fireproof any boiler, pipe or load-supporting structural member shall be wetted and removed from any building, structure, facility or installation subject to this paragraph before wrecking of load-supporting structural members is commenced. Boilers, pipe or load-supporting structural members that are insulated or fireproofed with friable asbestos materials may be removed as units or in sections without stripping or wetting, except that where the boiler, pipe or load-supporting structural member is cut or disjointed, the exposed friable asbestos materials shall be wetted. The friable asbestos debris shall be wetted adequately to insure that such debris remains wet during all stages of demolition and related handling operations.

b. No pipe or load-supporting structural member that is covered with friable asbestos insulating or fireproofing material shall be dropped or thrown to the ground from any building, structure, facility or installation subject to this paragraph, but shall be carefully lowered or carried to ground level.

c. No friable asbestos debris shall be dropped or thrown to the ground from any building, structure, facility or installation subject to this paragraph or from any floor to any floor below. For buildings, structures, facilities or installations 50 feet or greater in height, friable asbestos debris shall be transported to the ground via dust-tight chutes or containers.

3. Any owner or operator of a demolition operation who intends to demolish a building, structure, facility or installation to which the provisions of this paragraph would be applicable but which has been declared by proper state or local authority to be structurally unsound and which is in danger of imminent collapse is exempt from the requirements of this paragraph other than the reporting requirements specified by subsection (4) (d) 1. of this section and the wetting of friable asbestos debris as specified by subsection (4) (d) 2.a of this section.

(e) Spraying: There shall be no visible emissions to the outside air from the spray-on application of materials containing more than one percent asbestos, on a dry weight basis, used to insulate or fireproof equipment and machinery except as provided in paragraph (f) of this section. Spray-on materials used to insulate or fireproof buildings, structures, pipes and conduits shall contain less than one percent asbestos on a dry weight basis.

1. Any owner or operator who intends to spray asbestos materials to insulate or fireproof buildings, structures, pipes, conduits, equipment and machinery shall report such intention to the department at least 20 days prior to the commencement of the spraying operation. Such report shall include the following information:

a. Name of owner or operator.

b. Address of owner or operator.

c. Location of spraying operation.

d. Procedures to be followed to meet the requirements of this paragraph.

(f) Rather than meet the no-visible-emission requirements of paragraphs (a), (c), and (e) of this section, an owner or operator may elect to use the methods specified below to clean emissions containing particulate asbestos material before such emissions escape to, or are vented to, the outside air.

1. Fabric filter collection devices must be used, except as noted in subsections (4) (f) 2. and 3. of this section. Such devices must be operated at a pressure drop of no more than 4 inches water gage as measured across the filter fabric. The airflow permeability, as determined by ASTM method D737-69 must not exceed 30 $ft^3/min/ft^2$ for woven fabrics or 35 $ft^3/min/ft^2$ for felted fabrics, except that 40 $ft^3/min/ft^2$ for woven and 45 $ft^3/min/ft^2$ for felted fabrics is allowed for filtering air from asbestos ore dryers. Each square yard of felted fabric must weigh at least 14 ounces and be at least one-sixteenth inch thick throughout. Synthetic fabrics must not contain fill yarn other than that which is spun.

1m. American Society for Testing and Materials, Part 24, 1971. Copies of Method D737-69, from Part 24 — Textile Materials; are available for inspection at the offices of the department of natural resources, Pyare Square Building, and secretary of state and revisor of statutes, State Capitol, Madison, Wisconsin, and may be procured for personal use from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa., 19103.

2. If the use of fabric filters creates a fire or explosion hazard, the department may authorize the use of wet collectors designed to operate with a unit contacting energy of at least 40 inches water gage pressure.

3. The department may authorize the use of filtering equipment other than that described in subsections (4) (f) 1. and 2. of this section if the owner or operator demonstrates to the satisfaction of the department that the filtering of particulate asbestos material is equivalent to that of the described equipment.

4. All air-cleaning equipment authorized by this section must be properly installed, used, operated and maintained. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(g) Where the presence of uncombined water is the sole reason for failure to meet the no-visible-emission requirements of paragraphs (a), (c) or (e) of this section, such failure shall not be a violation of such emission requirements.

(5) CONTROL OF BERYLLIUM EMISSIONS. (a) Emissions to the atmosphere shall not exceed 10 grams of beryllium over a 24-hour period from:

1. Extraction plants, ceramic plants, foundries, incinerators and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys or beryllium-containing waste, and:

2. Machine shops which process beryllium, beryllium oxides or any alloy when such alloy contains more than 5% beryllium by weight.

(b) The burning of beryllium and/or beryllium-containing waste, except propellants, is prohibited except in incinerators, emissions from which must comply with paragraph (a).

(c) Emission to the atmosphere from rocket-motor test sites shall not cause time-weighted atmospheric concentration of beryllium to exceed 75 microgram minutes per cubic meter of air within the limits of 10 to 60 minutes, accumulated during any 2 consecutive weeks, in any area in which an effect adverse to public health could occur.

(d) If combustion products from the firing of beryllium propellant are collected in a closed tank, emissions from such tank shall not exceed 2 grams per hour and a maximum of 10 grams per day.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; cr. (3), Register, December, 1972, No. 204, eff. 1-1-73; cr. (4) and (5), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.20 Emergency episode levels and emergency emission control action programs. (1) EMERGENCY EPISODE LEVELS. (a) "Alert": The alert level is that concentration of pollutants at which first stage control actions are to begin. An alert will be declared when any pollutant reaches the alert level specified below at any monitoring site and meteorological conditions are such that the pollutant concentrations can be expected to remain at the alert level for 12 or more hours or increase or, in the case of oxidants, to recur the following day at the same or a higher level, unless control actions are taken.

1. The SO_2 dose is equal to or greater than 2.8 ppm-hr. (7,500 ug-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

2. The particulates dose is equal to or greater than 2.8 COHs-hr. (3,500 ug-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

3. SO_2 and particulate combined — product of SO_2, ppm, 24-hour average, and COHs, 24-hour average equal to 0.2 or product of SO_2 ug/m^3, 24-hour average, and particulate ug/m^3, 24-hour average equal to 65 x 10^3.

4. The CO dose is equal to or greater than 120 ppm-hr. (138 mg-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

5. The oxidant (O_3) dose is equal to or greater than 0.4 ppm-hr. (800 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

6. The NO_2 dose is equal to or greater than 2.4 ppm-hr. (4,510 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

(b) "Warning": The warning level indicates that air quality is continuing to degrade and that additional control actions are necessary. A warning will be declared when any pollutant reaches the

warning level specified below at any monitoring site and meteorological conditions are such that pollutant concentrations can be expected to remain at the warning level for 12 or more hours or increase or, in the case of oxidants, to recur the following day at the same or a higher level, unless control actions are taken.

1. The SO_2 dose is equal to or greater than 5.6 ppm-hr. (15,000 ug-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

2. The particulates dose is equal to or greater than 56 COHs-hr. (7,000 ug-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

3. SO_2 and particulate combined — product of SO_2, ppm, 24-hour average and COHs, 24-hour average equal to 0.8 or product of SO_2 ug/m^3, 24-hour average and particulate ug/m^3, 24-hour average equal to 261 x 10^3.

4. The CO dose is equal to or greater than 240 ppm-hr. (275 mg-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

5. The oxidant (O_3) dose is equal to or greater than 1.2 ppm-hr. (2,000 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

6. The NO_2 dose is equal to or greater than 4.8 ppm-hr. (9,040 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

(c) "Emergency": The emergency level indicates that air quality is continuing to degrade to a level that should never be reached and that the most stringent control actions are necessary. An emergency will be declared when any pollutant reaches the emergency level specified below at any monitoring site and meteorological conditions are such that this condition can be expected to continue for 12 or more hours, or, in the case of oxidants, to recur the following day.

1. The SO_2 dose is equal to or greater than 8.0 ppm-hr. (21,500 ug-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

2. The particulates dose is equal to or greater than 72 COHs-hr. (9,000 ug-hr/m^3) for any 8-hour period in the preceding 16 hours.

3. The SO_2 and particulate combined — product of SO_2 ppm, 24-hour average and COHs, 24-hour average equal to 1.2 or product of SO_2 ug/m^3, 24-hour average and particulate ug/m^3, 24-hour average equal to 393 x 10^3.

4. The CO dose is equal to or greater than 320 ppm-hr. (368 mg-hr/m^3) for any consecutive 8-hour period in the preceding 16 hours.

5. The oxidant (O_3) dose is equal to or greater than 1.4 ppm-hr. (2,800 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

6. The NO_2 dose is equal to or greater than 6.4 ppm-hr. (12,050 ug-hr/m^3) for any consecutive 4-hour period in the preceding 8 hours.

(2) GENERAL PROGRAM. (a) Any person responsible for the operation of a direct source which emits 0.25 tons per day or more of any air contaminant for which air standards have been adopted shall prepare emission control action programs consistent with good

industrial practice and safe operating procedures, for reducing the emission of the air contaminants into the outdoor atmosphere during periods of an AIR POLLUTION ALERT, AIR POLLUTION WARNING, or AIR POLLUTION EMERGENCY. Emission control action programs shall be designed to reduce or eliminate emissions of air contaminants into the outdoor atmosphere in accordance with the objectives set forth in Tables 1-5 of section NR 154.20 (3) (e).

(b) Emission control action programs as required under section NR 154.20(2) (a) shall be in writing and show the source of air contamination, the approximate amount of reduction of contaminants, the approximate time required to effect the program, a brief description of the manner in which the reduction will be achieved during each stage of an air pollution episode, and such other information as the department shall deem pertinent.

(c) During a condition of AIR POLLUTION ALERT, AIR POLLUTION WARNING, or AIR POLLUTION EMERGENCY, emission control action programs as required by section NR 154.20(2) (a) shall be made available on the premises to any person authorized to enforce the provisions of the department's episode procedure.

(d) Emission control action programs as required by section NR 154.20(2) (a) shall be submitted to the department upon request within 60 days of the receipt of such request; such emission control action programs shall be subject to review and approval by the department. If, in the opinion of the department, such emission control action programs do not effectively carry out the objectives as set forth in Tables 1-5 of section NR 154.20(3) (e), the department may disapprove said emission control action programs, state its reason for disapproval, and order the preparation of amended emission control action programs 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 emission control action program which, in the opinion of the department, meets the said objectives, the department may revise the emission control action program to cause it to meet these objectives. Such revised program will thereafter be the emission control action program which the person responsible must put into effect upon declaration of an air pollution episode by the secretary.

(3) EMERGENCY EPISODE ORDERS. The following are orders which may be appropriate for use by the secretary under section 144.40, Wis. Stats., upon his declaration that an air pollution emergency episode exists for any air contaminants for which air standards have been adopted:

(a) Air pollution alert:

1. Any one or combination of air contaminants:

a. Any person responsible for the operation of a source of air contamination as set forth in section NR 154.20(2) (a) shall take all AIR POLLUTION ALERT actions as required for such source of air contamination, and shall particularly put into effect the emission control action programs for an AIR POLLUTION ALERT.

2. Suspended particulate matter.

a. There shall be no open burning by any persons of tree wastes, vegetation, refuse, or debris in any form.

b. The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between 12:00 noon and 4:00 p.m.

c. Persons operating fuel-burning equipment which requires intermittent boiler lancing or soot blowing shall perform such operations, to the maximum extent possible, between the hours of 12:00 noon and 4:00 p.m.

3. Nitrogen oxides:

a. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

b. The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between 12:00 noon and 4:00 p.m.

(b) Air pollution warning:

1. Any one or combination of air contaminants:

a. Any person responsible for the operation of a source of air contamination as set forth in section NR 154.20 (2) (a) shall take all AIR POLLUTION WARNING actions as required for such source of air contamination, and shall particularly put into effect the emission control action programs for an AIR POLLUTION WARNING.

2. Suspended particulate matter:

a. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

b. The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.

c. Persons operating fuel-burning equipment which requires intermittent boiler lancing or soot blowing shall perform such operations, to the maximum extent possible, between the hours of 12:00 noon and 4:00 p.m.

3. Nitrogen oxides:

a. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

b. The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.

(c) Air pollution emergency:

1. Any one or combination of contaminants:

a. Any person responsible for the operation of a source of air contamination as described in section NR 154.20 (2) (a) shall take all AIR POLLUTION EMERGENCY actions as listed as required for such source of air contamination, and shall particularly put into effect the emission control action programs for an AIR POLLUTION EMERGENCY.

b. All manufacturing establishments except those included in section NR 154.20 (2) (a) will institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations which emit air contaminants to the extent possible without causing injury to persons or damage to equipment.

c. All places of employment described below shall immediately cease operations:

i. Mining and quarrying of nonmetallic minerals.

ii. All contract construction work except that which must proceed to avoid physical harm.

iii. Wholesale trade establishments, i.e., places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies.

iv. All offices of local, county, and state government and any other public body; except those offices that must continue to operate in order to enforce the requirements of this order pursuant to statute.

v. All retail trade establishments except pharmacies and stores primarily engaged in the sale of food.

vi. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services, offices of insurance carriers, agents and brokers, and real estate offices.

vii. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments, photographic studios, beauty shops, barber shops, shoe repair shops.

viii. Advertising offices, consumer credit reporting adjustment and collection agencies, duplicating, addressing, blueprinting, photocopying, mailing, mailing list and stenographic services, equipment rental services, commercial testing laboratories.

ix. Automobile repair, automobile services, garages.

x. Establishments rendering amusement and recreation services, including motion picture theaters.

xi. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

d. There shall be no open burning by any person of tree waste, vegetation, refuse, or debris in any form.

e. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.

f. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

(d) When the secretary determines that an air pollution episode condition exists at one or more monitoring sites solely because of

emissions from a limited number of sources, he may order such source or sources to put into effect the emission control action programs which are applicable for each episode stage.

(e) Tables for emission reduction:

TABLE 1. EMISSION REDUCTION OBJECTIVES FOR PARTICULATE MATTER

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Coal or oil-fired electric power generating facilities.	a. Substantial reduction by utilization of fuels having lowest available ash content.	a. Maximum reduction by utilization of fuels having lowest available ash content.	a. Maximum reduction by utilization of fuels having lowest available ash content.
	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Substantial reduction by diverting electric power generation to facilities outside of Alert Area.	c. Maximum reduction by diverting electric power generation to facilities outside of Warning Area.	c. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.
2. Coal or oil-fired process steam generating facilities.	a. Substantial reduction by utilization of fuels having lowest available ash content.	a. Maximum reduction by utilization of fuels having lowest available ash content.	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.	b. Maximum utilization of midday (12:00 Noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Reduction of steam load demands consistent with continuing plant operations.	c. Reduction of steam load demands consistent with continuing plant operations.	c. Taking the action called for in the emergency plan.
		d. Making ready for use a plan of action to be taken if an emergency develops.	
3. Manufacturing, processing, and mining industries.	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operations.	a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
OR Other persons required by the Department to prepare standby plans.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Elimination of air contaminants from trade waste disposal processes which emit particles, gases, vapors or malodorous substances.
	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Maximum reduction of heat load demands for processing.
4. Refuse disposal operations.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.
	b. Substantial reduction by limiting burning of refuse in incinerators to the hours between 12:00 Noon and 4:00 p.m.	b. Complete elimination of the use of incinerators.	b. Complete elimination of the use of incinerators.

TABLE 2. EMISSION REDUCTION OBJECTIVES FOR SULFUR OXIDES

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Coal or oil-fired electric power generating facilities.	a. Substantial reduction by utilization of fuels having lowest available sulfur content.	a. Maximum reduction by utilization of fuels having lowest available sulfur content.	a. Maximum reduction by utilization of fuels having lowest available sulfur content.
	b. Substantial reduction by diverting electric power generation to facilities outside of Alert Area.	b. Maximum reduction by diverting electric power generation to facilities outside of Warning Area.	b. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.
2. Coal or oil-fired process steam generating facilities.	a. Substantial reduction by utilization of fuels having lowest available sulfur content.	a. Maximum reduction by utilization of fuels having the lowest available sulfur content.	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
	b. Reduction of steam load demands consistent with continuing plant operations.	b. Reduction of steam load demands consistent with continuing plant operations.	b. Taking the action called for in the emergency plan.
		c. Reduction of heat load demands for processing consistent with continuing plant operations.	
3. Manufacturing and processing industries.	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operations.	a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
OR Other persons required by the Department to prepare standby plans.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Elimination of air contaminants from trade waste disposal processes which emit particles, gases, vapors or malodorous substances.
	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Maximum reduction of heat load demands for processing.

TABLE 3. EMISSION REDUCTION OBJECTIVES FOR NITROGEN OXIDES

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Steam-electric power generating facilities.	a. Substantial reduction by utilization of fuel which results in the formation of less air contaminant.	a. Maximum reduction by utilization of fuel which results in the formation of less air contaminant.	a. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.
	b. Substantial reduction by diverting electric power generation to facilities outside of Alert Area.	b. Maximum reduction by diverting electric power generation to facilities outside of Warning Area.	
2. Process steam generating facilities.	a. Substantial reduction by utilization of fuel which results in the formation of less air contaminant.	a. Maximum reduction by utilization of fuel which results in the formation of less air contaminant.	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
	b. Reduction of steam load demands consistent with continuing plant operations.	b. Reduction of steam load demands consistent with continuing plant operations.	
		c. Making ready for use a plan of action to be taken if an emergency develops.	
3. Manufacturing and processing industries.	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing, production and allied operations.	a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
OR Other persons required by the Department to prepare standby plans.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.	b. Elimination of air contaminants from trade waste disposal processes which emit particles, gases, vapors or malodorous substances.
	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Reduction of heat load demands for processing consistent with continuing plant operations.	c. Maximum reduction of heat load demands for processing.
4. Stationary internal combustion engines.	a. Reduction of power demands for pumping consistent with continuing operations.	a. Reduction of power demands for pumping consistent with continuing operations.	a. Maximum reduction by reducing power demands to absolute necessities consistent with personnel safety and preventing equipment damage.
		b. Maximum reduction by utilization of fuels or power source which results in the formation of less air contaminants.	b. Maximum reduction by utilization of fuels or power source which results in the formation of less air contaminants.
5. Refuse disposal operations.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.
	b. Substantial reduction by limiting burning of refuse in incinerators to the hours between 12:00 Noon and 4:00 p.m.	b. Complete elimination of the use of incinerators.	b. Complete elimination of the use of incinerators.

TABLE 4. EMISSION REDUCTION OBJECTIVES FOR HYDROCARBONS

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Petroleum products storage and distribution.	a. Substantial reduction of air contaminants by curtailing, postponing, or deferring transfer operations.	a. Maximum reduction of air contaminants by assuming reasonable economic hardship by postponing transfer operations.	a. Elimination of air contaminants by curtailing, postponing, or deferring transfer operations to the extent possible without causing damage to equipment.
2. Surface coating and preparation.	a. Substantial reduction of air contaminants by curtailing, postponing, or deferring transfer operations.	a. Maximum reduction of air contaminants by assuming reasonable economic hardship by postponing transfer operations.	a. Elimination of air contaminants by curtailing, postponing, or deferring transfer operations to the extent possible without causing damage to equipment.
e. Manufacturing and processing industries. OR Other persons required by the Department to prepare standby plans.	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing, production and allied operations.	a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.

TABLE 5. EMISSION REDUCTION OBJECTIVES FOR CARBON MONOXIDE

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Manufacturing industries OR Other persons required by the Department to prepare standby plans.	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operations.	a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
2. Refuse disposal operations.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.	a. Maximum reduction by prevention of open burning.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72; renum. (1) and (2) to be (2) and (3) and am., cr. (1), Register, June, 1975, No. 234, eff. 7-1-75.

NR 154.21 Limitations on county, regional, or local regulations. Nothing in these rules shall be construed to limit the provisions of any county, regional, or local ordinance, regulation, or resolution which is more stringent or restrictive.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.

NR 154.22 Severability. Should any section, paragraph, phrase, sentence, or clause of this chapter be declared invalid or unconstitutional, the remainder of this chapter shall not be affected thereby.

History: Cr. Register, March, 1972, No. 195, eff. 4-1-72.