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History: Chapter NR 154 as it existed on March 31, 1972 was repealed and a new chapter NR 154 was created, Register, March, 1972, No. 195, effective April 1, 1972.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) "Adsorption system" means a device containing adsorbent material (e.g., activated carbon, alumina, silica gel); an inlet and outlet for exhaust gases; and a system to regenerate the saturated adsorbent.

(3) "Affected facility" means 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.

(4) "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.

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

(6) "Aircraft operation" means a landing or takeoff.

(7) "Air curtain destructor" means an incineration device which utilizes a pit for burning combustible matter, into which air is blown at high velocity through a manifold and nozzel 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.

(8) "Air dried coating" means coatings which are dried by the use of air or forced warm air. Forced warm air includes processes whereby the coated object is heated above ambient temperature up to a maximum of 90°C (194°F) to decrease drying time.

(9) "Air pollution" means 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.

(10) "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.

(11) "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.

(12) "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.

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

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

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

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

(17) "AQCR" means air quality control region. Air quality control regions all or part of which lie in Wisconsin are delineated in s. NR 155.02 (2), Wis. Adm. Code.

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

(19) "Asbestos" means any of the 6 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.

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

(21) "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.

(22) "Associated parking area" means a parking facility owned or operated in conjunction with an indirect source.

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

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

(25) "'Average daily traffic' or '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.

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

(27) "Baseline transfer efficiency" means the typical transfer efficiency, as defined by the department, for a specific operation in an industry.

(28) "Bead dipping" means the dipping of an assembled tire bead into a solvent based cement.

(29) "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.

(30) "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.

(31) "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.

(32) "Breakdown" means a sudden failure of emission control or emission monitoring equipment to function as a result of wear, failure to repair, breakage, unavoidable damage, or other unintentional causes.

(33) "BTU" means British thermal unit.

(34) "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.

(35) "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.

(36) "Capture efficiency" means the weight per unit time of an air contaminant entering a capture system and delivered to a control device divided by the weight per unit time of the air contaminant generated by the source, expressed as a percentage.

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

(38) "Carbon bed breakthrough" means a concentration of VOC in the exhaust from a carbon adsorption device that exceeds 10% weight of the inlet VOC concentration.

(39) "Class II hardboard paneling finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

Note: See National Bureau of Standards, Voluntary Product Standard PS-59-73, "Prefinished Hardwood Paneling." Copies of this document 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 National Bureau of Standards, Washington, D.C. 20234.

(40) "Clear coat" means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color.

(41) "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.

(42) "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, or cured.

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

(44) "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.

(45) "Commence construction" means to engage in a program of on-site 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.

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

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

(48) "Component" means, for purposes of petroleum refineries, any piece of equipment at a refinery which has the potential to leak VOCs. These pieces of equipment include, but are not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open ended pipes. Excluded from these pieces of equipment are valves which have no external controls, such as in-line check valves.

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

(50) "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.

(51) "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.

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

(53) "Control system" means any number of control devices, including condensers, which are designed and operated to reduce the quantity of air contaminants emitted to the atmosphere.

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

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

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

(57) "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. Asphalt which contains less than 5% by weight petroleum solvents (disregarding any residual oils added) is not included in this definition.

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

(59) "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.

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

(61) "Direct source" means 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.).

(62) "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, $C = f(T)$.

(63) "Dry cleaning facility" means any facility engaged in the cleaning of fabrics in an essentially nonaqueous solvent by means of one or more washes in solvent, extraction of excess solvent by spinning, and drying by tumbling in an airstream. The facility includes but is not limited to any washer, dryer, filter and purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and valves.

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

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

(66) "Emission point" means any individual opening at a fixed location through which air contaminants are emitted.

(67) "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.

(68) "End sealing compound" means a synthetic rubber compound which is coated onto can ends and which functions as a gasket when the end is assembled on the can.

(69) "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.

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

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

(72) "Extreme performance coatings" means coatings designed for harsh exposure or exposure to one or more of the following: the weather all of the time, temperatures consistently above 95°C, detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

(73) "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.

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

(75) "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.

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

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

(78) "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.

(79) "Forebays" means the primary sections of a wastewater separator.

(80) "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.

(81) "Freeboard ratio" means the freeboard height divided by the internal width of the degreaser tank.

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

(83) "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, or any gaseous mixture of such gas and natural gas which is combusted.

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

(85) "Fugitive emission" means an emission from any emission point within a facility other than a flue or stack.

(86) "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.

(87) "Gasoline" means any petroleum distillate having a Reid vapor pressure of 27.6 kPa (4 psia) or greater.

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

(89) "Gas service" means petroleum refinery equipment which processes, transfers or contains a VOC or mixture of VOCs in the gaseous phase.

(90) "Green tires" means assembled tires before molding and curing have occured.

(91) "Green tire spraying" means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.

(92) "Hardboard" means a panel manufactured primarily from interfelted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.

(93) "Hardwood plywood" means a plywood whose surface layer is a veneer of hardwood.

(94) "Heat sensitive material" means materials which cannot consistantly be exposed to temperatures greater than 95°C (203°F).

(94m) "Highway" has the meaning given it in s. 340.01 (22), Stats.

(95) "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.

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

(97) "Hydrophobic substrate" means any substrate that is resistant to or avoids wetting. This may include but is not limited to polyethylene, polypropylene, cellophane, metalized polyester, nylon, and mylar.

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

(99) "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.

(100) "Indirect source" means 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 highways and roads; parking facilities; retail, commercial and industrial facilities; recreation, amusement, sports and entertainment facilities; airports; office and government buildings; apartment and condominium buildings; and education facilities.

(101) "Interior sheet base coating" means 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.

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

(103) "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.

(104) "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.

(105) "KPa" means kilo Pascals (1.0 kPa = 0.15 psia).

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

(107) "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.

(108) "Leaking component" means any component at a petroleum refinery which has a VOC concentration exceeding 10,000 ppm when tested in the manner approved by the department.

(109) "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.

(110) "Liquid-mounted seal" means a primary floating roof seal mounted in continuous contact with the liquid in a liquid organic compound storage tank between the tank wall and the floating roof around the internal circumference of the tank.

(111) "Liquid service" means petroleum refinery equipment which processes, transfers or contains a VOC or mixture of VOCs in the liquid phase.

(112) "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.

(113) "'Lower explosive limit' or 'LEL'" means the lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed as percent propane in air by volume.

(114) "Low solvent coating or ink" means a coating or ink which contains less organic solvent than the conventional coatings used by the particular industry. Low solvent coatings or inks include water-borne, higher solids, electrodeposition and powder coatings or inks.

(115) "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.

(116) "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.

(117) "Mobile source" means 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.).

(118) "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.

(118m) "Motor vehicle" or "vehicle" means every self-propelled device, except railroad trains, by which any person or property is or may be transported or drawn upon a highway.

(118n) "Municipality" has the meaning given it in s. 144.01 (6), Stats.

(119) "Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes which may be supplemented by fillers and toners.

(120) "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.

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

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

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

(124) "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.)

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

(126) "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.

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

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

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

(130) "Overall emission reduction efficiency" means the weight per unit time of an air contaminant removed by a control device divided by the weight per unit time of the air contaminant generated by the source, expressed as a percentage.

(131) "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.

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

(133) "Packaging rotogravure printing" means rotogravure printing upon paper, paper board, metal foil, plastic film, or other substrates, which in subsequent operations are formed into packaging products or labels for articles to be sold.

(134) "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.

(135) "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.

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

(137) "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.

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

(139) "Passenger type tire" means agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to 50.8 cm (20 inches) and cross section dimension up to 32.5 cm (12.8 inches).

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

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

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

(143) "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.

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

(145) "Petroleum liquid" means crude petroleum, petroleum, condensate and any finished or intermediate products manufactured or ex-

tracted in a petroleum refinery or in a facility which produces oils from tar sands, shale, coal or coke.

(146) "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.

(147) "Photochemically reactive organic substances" 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) Group 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.

(148) "Pneumatic rubber tire manufacture" means the production of pneumatic rubber passenger type tires on a mass production basis.

(149) "Portable source" means 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 to be a direct stationary source which is subject to the requirements of ss. NR 154.04 and 154.05.

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

(151) "Printed interior panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

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

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

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

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

(156) "Production equipment exhaust system" means a device for collecting and directing out of the work area fugitive emissions from reactor openings, centrifuge openings, and other vessel openings at a pharmaceutical manufacturing plant.

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

(158) "Psia" means pounds per square inch absolute.

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

(159m) "Public trafficable area" means any trafficable area which is owned, operated, maintained or controlled by a municipality, interstate agency, state agency or federal agency.

(160) "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.

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

(162) "'Reasonably available control technology' or '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.

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

(164) "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).

(165) "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.

(165m) "Roadway" has the meaning given it in s. 340.01 (54), Stats.

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

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

(168) "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.

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

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

(171) "Semistationary source" means 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.).

(172) "Separation operation" means a process that separates a mixture of compounds and solvents into 2 or more components. Specific mechanisms include extraction, centrifugation, filtration, and crystallization.

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

(174) "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.

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

(176) "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.

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

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

(179) "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.

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

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

(182) "'Standard metropolitan statistical area' or '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.

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

(184) "Stationary source" means 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.

(185) "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.

(186) "Surface coating" means the application of a coating to a product in a coating line.

(187) "Synthesized pharmaceutical manufacturing" means manufacture of pharmaceutical products by chemical synthesis.

(188) "Technological infeasibility" means incapable of being accomplished or carried out as a matter of practicality; i.e., technically impracticable rather than technically impossible.

(189) "Thin particleboard" means a manufactured board 0.64 centimeters (1/4 inch) or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

(190) "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.

(191) "Tileboard" means paneling that has a colored waterproof surface coating.

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

(193) "'Total reduced sulfur' or '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.

(193m) "Trafficable area" means any area, including but not limited to a parking lot or storage area, which is external to a building or structure, is reasonably capable of being traveled by a motor vehicle, and is accessible to a motor vehicle.

(194) "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.

(195) "Transfer efficiency" means the portion of coating solids which adheres to the surface being coated during the application process, expressed as a percentage of the total volume of coating solids delivered to the applicator.

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

(197) "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.

(198) "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.

(199) "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.

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

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

(202) "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.

(203) "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.

(204) "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 or vapor holding tank.

(205) "Vapor-mounted seal" means any primary floating roof seal mounted so that there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(206) "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.

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

(208) "'Volatile organic compound' or 'VOC'" means any compound of carbon that has a vapor pressure greater than 0.1 millimeter of mercury (0.0019 psia) at standard conditions, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

(209) "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.

(210) "Water based sprays" means release compounds, sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for all organic solvents.

(211) "Waxy, heavy pour crude petroleum" means a crude petroleum with a pour point of 10°C (50°F) or higher as determined by the ASTM standard D97-66, "Test For Pour Point of Petroleum Oils."

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; am. Register, March, 1981, No. 303, eff. 4-1-81; cr. (118m) and (193m), Register, March, 1982, No. 315, eff. 4-1-82; cr. (94m), (118n), (159m) and (165m), Register, October, 1982, No. 322, eff. 11-1-82.

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 s. NR 154.06 (9) was complied 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 s. 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.

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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. (1), 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:

(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

2. Final compliance for sources covered under subs. (2) (a) 1.c., (3) (a) 1.a., (b) 1.a., (c) 1.a., (4) (c) 1., (d) 1., (e) 1., (f) 1., (h) 1., (i) 1., (j) 1., (6) (a) 1., (7) (a) 1., (b) 1. and (c) 1. is not later than December 31, 1982; and

3. For sources covered under subs. (2) (a) 1.d., (b) 1., (3) (a) 1.b., (b) 1.b., (c) 1.b., (e) 1., (4) (k) 1., (l) 1., (m) 1., (6) (b) 1., (7) (d) 1., (8) (a) 1. and (9) (a) 1. final compliance shall not exceed that required in sub. (12).

(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. The provisions of this paragraph may be applied, subject to approval of the department, where the requirements of this section are met by use of other energy intensive control devices.

(e) *Registration of certain solvents, exemption.* 1. Except for the provisions of sub. (1) (a) and (b), and this paragraph, this section does not apply to the use of methylene chloride and methyl chloroform.

2. Any person operating a source which has total combined emissions of methylene chloride and methyl chloroform in excess of 0.5 tons in a calendar year shall register the solvent use with the department by February 1 of the year following such use.

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; am., Register, March, 1981, No. 303, eff. 4-1-81; cr. (12) (b) and am. (12) (a) (intro.) and (g) 5., Register, July, 1981, No. 307, eff. 8-1-81; am. (13) (a) and cr. (13) (e), Register, December, 1982, No. 324, eff. 1-1-83.

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 sub-

stantially 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 s. NR 154.11 (7) (c) of these rules.

(b) *Particulate emission limits.* 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).

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 ug/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,

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.