

Chapter NR 400

AIR POLLUTION CONTROL DEFINITIONS

NR 400.01 Applicability; purpose.
NR 400.02 Definitions.

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Note: Chapter 285, 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. Chapters NR 400 to 499 are the central part of that program. Chapter 285, Stats., also addresses 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 prevent detrimental effects on property and our environment.

Nothing in chs. NR 400 to 499 or in ch. 285, Stats., prohibits a county or local jurisdiction from adopting more restrictive ordinances where local conditions indicate their need. Chapters NR 400 to 499, all or in part, may be adopted by reference by a county or municipality.

It is the department's policy 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.

Chapters NR 400 to 499 are subject to periodic revision to reflect changing state and federal mandates, advancing control technology, increasing knowledge of the effect on human 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 400.01 Applicability; purpose. c1d APPLICABILITY. This chapter applies to terms, units and abbreviations used in chs. NR 400 to 499. In addition to the definitions in this chapter, other definitions may be included in individual chapters or sections in chs. NR 401 to 499 which are applicable to terms, units or abbreviations used in those respective chapters or sections. If an individual chapter or section defines a term which is also defined in this chapter, the definition contained in the individual chapter or section shall apply within that chapter or section, rather than the definition in this chapter.

c2d PURPOSE. This chapter is adopted under ss. 285.11 and 285.13, Stats., to establish a set of definitions for terms commonly used throughout chs. NR 400 to 499. Individual chapters or sections in chs. NR 401 to 499 may contain additional definitions for terms unique to an individual chapter or section or to a specified series of chapters.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. Register, February, 1990, No. 410, eff. 3-1-90; am. c1d, Register, April, 1995, No. 472, eff. 5-1-95; correction in c2d made under s. 13.93 c2md cbd 7., Stats., Register, 1996, No. 492; am. c1d and c2d, Register, March, 1997, No. 495, eff. 4-1-97.

NR 400.02 Definitions. Except when another definition is specifically made applicable, in chs. NR 401 to 499:

c1d XAcid rain allowanceY or XallowanceY means an authorization by the administrator under the acid rain program to emit up to one ton of sulfur dioxide during or after a specified calendar year.

c2d XAcid rain phase I affected unitY means any unit listed in Table A of 42 USC 7651c. These are:

cad Wisconsin Power and Light — Edgewater generating station unit 4.

cbd Dairyland Power Cooperative — Genoa generating station unit 3.

ccd Wisconsin Power and Light — Nelson Dewey generating station units 1 and 2.

cdd Wisconsin Electric Power Company — North Oak Creek generating station units 1, 2, 3 and 4 and South Oak Creek generating station units 5, 6, 7 and 8.

ced Wisconsin Public Service Corporation — Pulliam generating station unit 8.

c3d XAcid rain programY means the national sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established in accordance with title IV of the Act c42 USC 7651 to 7651od and 40 CFR parts 72 to 78.

c4d XAcid rain provisionY means any provision of an operation permit implementing an applicable requirement of the acid rain program.

c5d XActY means the federal Clean Air Act, as defined in s. 285.01 c19d, Stats.

c6d XActual emissionsY means the total emissions generated by a facility over a specified period of time taking into account any reductions made by a control device or technique.

c7d XActual operationY means, for purposes of nonmetallic mineral quarrying or mining, the number of calendar days on which there is operation of any blasting, drilling or other movement or transfer of naturally occurring rock at a quarry or mine.

c8d XActual productionY means, for purposes of nonmetallic mineral quarrying or mining, sales amount in tons of non-metallic mineral as measured at the quarry or mine.

c9d XAdministratorY means the administrator of the EPA or designee.

c10d XAffected sourceY means a stationary source that includes one or more affected units that are subject to an emissions reduction requirement or emissions limitation under the acid rain program.

c11d XAffected unitY means an emissions unit that is subject to any emissions reduction requirement or emissions limitation under the acid rain program.

c12d XAir contaminantY has the meaning given in s. 285.01 c1d, Stats.

c13d XAir contaminant sourceY has the meaning given in s. 285.01 c2d, Stats.

c14d XAir curtain destructorY has the meaning given in s. 289.51, Stats.

c15d XAir pollutantY means an air contaminant as defined in s. 285.01 c1d, Stats.

c16d XAir pollutionY 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.

c17d XAir pollution control permitY has the meaning given in s. 285.01 c4d, Stats.

c18d XAir quality control regionY or XAQCRY means an area designated under 42 USC 7407 or s. NR 404.03 in which a plan to maintain or achieve air standards is implemented on a regional basis. Air quality control regions include both interstate and intrastate regions.

c19d XAir regionY 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.

c19md XAir standardY or Xambient air quality standardY means the specified levels of air quality which are necessary to protect public health and welfare. Ambient air quality standards include primary and secondary air standards.

c20d XAllocation of the available air resourceY has the meaning designated in s. 285.01 c5d, Stats.

c21d XAllowable emissionY has the meaning given in s. 285.01 c7d, Stats.

c22d XAlternate designated representativeY means a responsible natural person, authorized by the owners and operators of an affected source and of all affected units at the source to act in lieu of the designated representative, as evidenced by a certificate of representation submitted in accordance with 40 CFR 72.22, who may act on behalf of the designated representative to represent and legally bind each owner and operator, as a matter of federal law, in matters pertaining to the acid rain program.

c23d XAlternative methodY means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the department[s] satisfaction to produce, in specific cases, results adequate for the department[s] determination of compliance.

c24d XAmbient airY means the portion of the atmosphere external to buildings and to which the general public has access.

c25d XAmbient air incrementY or Xair incrementY means the maximum allowable increase in concentration of an air contaminant above the base line concentration of the air contaminant.

c26d XApplicable requirementY means all of the following as they apply to emissions units at a source, including requirements that have been promulgated or approved by EPA or the department through rulemaking at the time of permit issuance but for which compliance is required after the date of permit issuance:

cad Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking in 40 CFR part 52.

cbd Any term or condition of any construction permit issued pursuant to ch. NR 405, 406 or 408 or to regulations approved or promulgated by EPA through rulemaking under title I of the Act c42 USC 7401 to 7515d.

ccd Any standard or other requirement under section 111 of the Act c42 USC 7411d.

cdd Any standard or other requirement under section 112 of the Act c42 USC 7412d.

ced Any standard or other requirement of the acid rain program.

cfid Any requirements established pursuant to section 504 cbd or section 114 cad c3d of the Act c42 USC 7661c cbd or 7414 cad c3dd.

cgd Any standard or other requirement governing solid waste incineration, under section 129 of the Act c42 USC 7429d.

chd Any standard or other requirement for consumer and commercial products, under section 183 ced of the Act c42 USC 7511b cedd.

cid Any standard or other requirement for tank vessels, under section 183 cfd of the Act c42 USC 7511b cfdd.

cjd Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under title VI of the Act

c42 USC 7671 to 7671qd, unless the administrator has determined that the requirements need not be contained in an operation permit.

ckd Any national ambient air quality standard or increment or visibility requirement under part C of title I of the Act c42 USC 7470 to 7492d.

cld Any emission limit or other requirement in ch. 285, Stats., or chs. NR 400 to 499.

cmd Any source-specific emission limitation established pursuant to ch. 285, Stats., or rules promulgated thereunder.

c26md XApplication equipmentY means a device used to apply adhesive, coating, ink or polyester resin materials.

c27d XApprovedY means approved by the department of natural resources.

c27md XApproved material safety data sheetY means a material safety data sheet which meets the reporting requirements of the Superfund Amendments Reauthorization Act of 1986 c42 USC 9671 to 9675d or regulations of the occupational safety and health administration under 29 CFR 1910.1200 cgd, as in effect on February 1, 1998.

c28d XBaseline concentrationY has the meaning given in s. 285.01 c11d, Stats.

c29d XBasic emissions unitY means the smallest collection of equipment which in combination emits or is capable of emitting any air contaminant.

c30d XBelt conveyorY means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

c31d XBest available control technologyY has the meaning given in s. 285.01 c12d, Stats.

c32d XBiweeklyY means any 14-day period of time.

c33d XBoilerY 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.

c34d XBreakdownY 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.

c35d XBucket elevatorY means a conveying device for grain, minerals or other materials consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

c36d XBulk gasoline plantY 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.

c36md XBusiness dayY means any day except Saturday, Sunday or a state holiday as designated in s. 230.35 c4d cad, Stats.

c37d XCapacityY means, for purposes of nonmetallic mineral processing, the cumulative rated capacity of all initial crushers that are part of a processing plant.

c38d XCapture efficiencyY 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.

c39d XCapture systemY means the equipment including hoods, ducts, fans, etc.d used to contain, capture, or transport an air contaminant to a control device.

c40d XCoalY means all solid fuels classified as anthracite, bituminous, subbituminous or lignite by ASTM designation D388-99e1 c2004d, incorporated by reference in s. NR 484.10 c7d.

c41d XCoal-derived fuelY means any fuel, whether in a solid, liquid or gaseous state, produced by the mechanical, thermal or chemical processing of coal, such as pulverized coal, coal refuse, liquified or gasified coal, washed coal, chemically cleaned coal, coal-oil mixtures and coke.

c42d XCoin-operated dry cleaning machineY means a dry cleaning machine that is operated by the customer by placing articles into the machine, turning the machine on, and removing articles from the machine.

c43d XCold cleaningY 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.

c44d XCommence constructionY means to engage in a program of on-site construction, including a 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.

c45d XCommence modificationY 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.

c45md XContact adhesiveY means an adhesive that is applied to 2 substrates, dried and mated under only enough pressure to result in good contact. The bond is immediate and sufficiently strong to hold pieces together without further clamping, pressure or airing.

c46d XControl deviceY means equipment used to destroy or remove air contaminants in a gas stream exiting a capture system prior to emission.

c47d XControl efficiencyY means the percentage by which a control device or technique reduces the emissions from a stationary source.

c48d XControl systemY means any number of control devices, including condensers, which are designed and operated to reduce the quantity of air contaminants emitted to the atmosphere.

c49d XConveyorized non-vapor degreasingY means the continuous process of cleaning and removing soils from metal surfaces by operating with non-vaporized solvents.

c50d XConveyorized vapor degreasingY means the continuous process of cleaning and removing soils from metal surfaces by operating with vaporized solvents.

c51d XCrusherY means a machine used to crush any non-metallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill and impactor.

c52d XDayY means a 24-hour period beginning at midnight.

c53d XDepartmentY means the department of natural resources, state of Wisconsin.

c54d XDesignated representativeY means a responsible natural person authorized by the owners and operators of an affected source and of all affected units at the source, as evidenced by a certificate of representation submitted in accordance with 40 CFR 72.20 to 72.25, to represent and legally bind each owner and operator, as a matter of federal law, in matters pertaining to the acid rain program.

c54md XDigital printingY means the transfer of electronic files directly from a computer to an electronically driven output device that prints the image directly on the selected substrate. Printing using home and office equipment is excluded from this definition.

c55d XDirect sourceY means any stationary source which may directly result in the emission of any air contaminant at a fixed location.

Note: Examples are a foundry, a grain elevator, a gravel or stone quarry, a paper mill, a power plant or the demolition of a building.

c57d XEmissionY means a release, whether directly or indirectly, of any air contaminant to the atmosphere.

c58d XEmission limitationY or Xemission standardY has the meaning given in s. 285.01 c16d, Stats.

c59d XEmission pointY means any individual opening at a fixed location through which air contaminants are emitted.

c60d XEmission reduction optionY has the meaning given in s. 285.01 c17d, Stats.

c61d XEmissions unitY means any part of a stationary source which emits or is capable of emitting any air contaminant.

c62d XEquivalent methodY means any method of sampling and analyzing for an air pollutant which has been demonstrated to the department[s satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

c63d XFacilityY means an establishment—residential, commercial, institutional or industrial—which emits or causes emissions of air contaminants.

c64d XFederally enforceableY means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to chs. NR 440 and 447 to 449 and subch. III of ch. NR 446 and under sections 111 and 112 of the Act c42 USC 7411 and 7412d, requirements within any applicable state implementation plan and any permit requirements established pursuant to ch. NR 405, 406, 407, 408, or 409 except those limitations and conditions which are designated as not federally enforceable.

Note: Permit or state implementation plan limitations generally considered federally enforceable are limitations on the allowable capacity of the equipment, requirements for the installation, operation and maintenance of pollution control equipment, limits on hours of operation and restrictions on amounts of materials combusted, stored or produced. To be federally enforceable, restrictions on operation, production or emissions must reflect the shortest practicable time period, in no event for a period in excess of 30 days, and they must be tied to other enforceable operating restrictions at the source. General limitations on potential to emit, such as yearly limits in tons per year, by themselves, are not considered federally enforceable. The use of hourly, daily, weekly or monthly rolling averages are generally acceptable. Any federally enforceable limitations or conditions must be practically enforceable, ensure continuous compliance with the restrictions and include adequate testing, monitoring and recordkeeping procedures in an applicable federally issued permit, in a federally approved state implementation plan or in a permit issued under the state implementation plan.

c65d XFixed capital costY means the capital needed to provide all of the depreciable components of a stationary source.

c66d XFixed plantY means any nonmetallic mineral processing plant at which the processing equipment is attached or clamped by a cable, chain, turnbuckle, bolt or other means, except electrical connections, to any anchor, slab or structure including bedrock.

c66md XForest County Potawatomi Community Class I areaY or XFPC Class I areaY means those land parcels of the Forest County Potawatomi Reservation that are designated as a non-federal Class I area by EPA under 40 CFR 52.2581. The FPC Class I area has a geographic center, as determined by the department, at latitude 45.49978vN, longitude 88.64377vW.

c67d XFossil fuelY means natural gas, petroleum, coal or any form of solid, liquid or gaseous fuel derived from such material.

c68d XFossil fuel-firedY means the combustion of fossil fuel or any derivative of fossil fuel, alone or in combination with any other fuel, without regard to the percentage of fossil fuel consumed in any calendar year.

c69d XFuelY means any solid, liquid or gaseous materials used to produce useful heat or power by burning.

c70d XFuel oilY means any petroleum-based fuel, including diesel fuel or petroleum derivatives such as oil tar, as defined in ASTM D396-02a, incorporated by reference in s. NR 484.10 c8d, and any recycled or blended petroleum products or petroleum by-products used as a fuel whether in a liquid, solid or gaseous state.

c71d XFugitive emissionY means an emission from any emission point within a facility other than a flue or stack.

c72d XGasolineY means any petroleum distillate or petroleum distillate{alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater which is used as a fuel for internal combustion engines.

c73d XGasoline dispensing facilityY means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.

c73md XGeneral permitY means a permit that may be applicable to similar stationary sources and is issued in accordance with s. 285.60 c3d, Stats.

c74d XGraphic artsY means any printing operations described by 2-digit major group 27 in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05 c1d.

c74md XGreenhouse gasesY or XGHGY means an air pollutant that is the aggregate of carbon dioxide cCO₂d, methane cCH₄d, nitrous oxide cN₂Od, sulfur hexafluoride cSF₆d, hydrofluorocarbons cHFCsd, and perfluorocarbons cPFCsd.

c75d XGrinding millY means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator or air classifier, where such systems are used.

c76d XHalogenated hazardous air pollutant compoundY or Xhalogenated HAP compoundY means methylene chloride cCAS no. 75-09-2d, perchloroethylene cCAS no. 127-18-4d, trichloroethylene cCAS no. 79-01-6d, 1,1,1-trichloroethane cCAS no. 71-55-6d, carbon tetrachloride cCAS no. 56-23-5d or chloroform cCAS no. 67-66-3d.

c77d XHalogenated hazardous air pollutant solventY or Xhalogenated HAP solventY means any solvent that contains a halogenated HAP compound or a combination of halogenated HAP compounds, in a total concentration greater than 5% by weight. The concentration of these compounds in the solvent may be determined using Method 18 of Appendix A, 40 CFR part 60, incorporated by reference in s. NR 484.04 c16d, material safety data sheets or engineering calculations.

c78d XHazardous air pollutants listed under section 112cbd of the actY means the federally regulated air pollutants included in the list in section 112cbdc1d of the Act c42 USC 7412cbdc1dd as revised by 40 CFR part 63 Subpart C.

c79d XHeat inputY means the total gross calorific value per unit of time of all fuels being burned, where gross calorific value of a fuel is measured by ASTM Method D240-02, D1826-94 or D5865-04, incorporated by reference in s. NR 484.10 c4d, c26d

and c55gd. Where the test method gives a higher and a lower heating value, heat input is calculated in Btu per hour using the higher heating value of the fuel.

c80d XHighwayY has the meaning given it in s. 340.01 c22d, Stats.

c81d XHourY means any 3,600 second period.

c82d XImplementation planY means a plan adopted to implement, maintain and enforce air standards within the state, an air region, or a portion of the state or region.

c83d XIncineratorY 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.

c84d XIncrease in the net amount of emissionsY has the same meaning as the phrase Xnet emissions increaseY which is defined in s. NR 405.02 c24d.

c85d XIndirect sourceY means any stationary source which attracts or may attract mobile source activity or on which mobile source activity is conducted, thus resulting in the indirect emissions of any air contaminant, at or on the indirect source itself, attributable to the motor vehicles or the mobile source activity. 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, bus terminals and train stations; office and government buildings; and educational facilities.

c85md XIndustrial cleaning operationsY means the process of cleaning products, product components, tools, equipment or general work areas during production, repair, maintenance or servicing with solvents or solvent solutions.

c86d XIndustrial sand mineY means any mine, pit or quarry to which the standard industrial classification cSICd category number 1446 applies. The SIC category for a source is determined by reference to the Standard Industrial Classification Manual, 1987, which is incorporated by reference in s. NR 484.05 c1d.

c87d XInfectious wasteY has the meaning given in s. 287.07 c7d ccd 1. c., Stats.

Note: For more detailed information on what the department treats as infectious waste, see subch. II of ch. NR 526.

c88d XIntersectionY has the meaning given in s. 340.01 c25d, Stats.

c89d XKraft pulpY means any pulp produced with an alkaline sulfide solution containing sodium hydroxide and sodium sulfide for a cooking liquor.

c90d XLaboratoryY means a facility or portion of a multi-use facility which does not produce a product for regular commercial use or sale and which is used primarily for scientific or technical experimentation or observation of matter for the purpose of research, development, quality assurance, analysis or teaching.

c91d XLedger rock quarryY means any open pit to which the standard industrial classification cSICd category number 1411, 1422, 1423, or 1429 applies where drilling and blasting is required to extract the nonmetallic mineral. The SIC category for a source is determined by reference to the Standard Industrial Classification Manual, 1987, which is incorporated by reference in s. NR 484.05 c1d.

c92d XLight-duty trucksY means any motor vehicles rated at 3864 kilograms c8500 poundsd gross weight or less which are designed primarily for the purpose of transporting goods and materials, or derivatives of such vehicles.

c93d XLowest achievable emission rateY has the meaning given in s. 285.01 c23d, Stats.

c93md XMaintenance cleaningY means an activity carried out to keep general work areas, tools, machinery or equipment, excluding application equipment, in clean and good operational condition.

c94d XMalfunctionY means any sudden failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown are not malfunctions.

c95d XMaximum theoretical emissionsY means the quantity of air contaminants that theoretically could be emitted by a stationary source without control devices based on the design capacity or maximum production capacity of the source. When determining annual maximum theoretical emissions, a source shall be presumed to operate 8,760 hours per year unless its physical design precludes 8,760 hours of operation per year. Where a source's physical design restricts the number of hours it may operate, annual maximum theoretical emissions shall be calculated taking this restriction into account. In determining the maximum theoretical emissions of VOCs for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings and inks with the highest VOC content used in practice by the source. In determining the maximum theoretical emissions of a hazardous air contaminant for a source, the design capacity or maximum production capacity shall include the use of raw materials, coatings, inks and fuels with the highest hazardous air contaminant content used in practice by the source. Realistic operating conditions shall be taken into account in determining emissions under this subsection.

c96d XMetropolitan countyY means a county which has been designated as either a metropolitan statistical area or a primary metropolitan statistical area by the federal office of management and budget in Metropolitan Areas, 1993, incorporated by reference in s. NR 484.05 c3d.

Note: The 20 Wisconsin counties which have been so designated are the counties of Brown, Calumet, Chippewa, Dane, Douglas, Eau Claire, Kenosha, La Crosse, Marathon, Milwaukee, Outagamie, Ozaukee, Pierce, Racine, Rock, Sheboygan, St. Croix, Washington, Waukesha and Winnebago.

c97d XMinor sourceY means any stationary source which is not a major source.

Note: Definitions for Xmajor sourceY which apply in different situations are given in ss. NR 405.02 c22d, 407.02 c4d, 408.02 c21d, 460.02 c24d, 468.20 c2d cLd and 468.30 c2d cgd.

c98d XMobile sourceY means any motor vehicle, vessel, aircraft or equipment other than a semistationary source which is capable of emitting any air contaminant while moving or idling on the ground or in the water. Mobile sources include automobiles, motorcycles, trucks, buses, snowmobiles, motorboats, steamships, earthmoving equipment, locomotives and aircraft.

c99d XModificationY means any physical change in, or change in the method of operation of, a stationary source that increases the amount of emissions of an air contaminant or that results in the emission of an air contaminant not previously emitted. A modification does not include any changes identified in s. NR 406.04 c4d.

c102d XMotor vehicleY or XvehicleY means every self-propelled device, except railroad trains, by which any person or property is or may be transported or drawn upon a highway.

c103d XMunicipalityY has the meaning given it in s. 285.01 c28d, Stats.

c104d XNatural gasY means a naturally occurring fluid mixture of hydrocarbons containing little or no sulfur such as meth-

ane, ethane or propane, produced in geological formations beneath the earth's surface, and maintaining a gaseous state at standard atmospheric temperature and pressure conditions.

c105d XNew direct or portable sourceY 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.

c107d XNitrogen oxidesY or XNO_xY means all oxides of nitrogen except nitrous oxide.

c107md XNon-atomized flowY means the use of solvent or solvent solution in the form of a liquid stream without atomization to remove uncured adhesives, uncured inks, uncured coatings or contaminants from an article.

c108d XNonattainment areaY has the meaning given in s. 285.01 c30d, Stats.

c109d XNonmetallic mineralY means any of the following minerals or any mixture of which more than half the weight is any combination of the following minerals:

cad Crushed and broken stone, including limestone, dolomite, granite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale and shell.

cbd Sand and gravel.

ccd Clay including kaolin, fireclay, bentonite, Fuller's earth, Ball clay and common clay.

cdd Rock salt.

ced Gypsum.

cfD Sodium compounds, including sodium carbonate, sodium chloride and sodium sulfate.

cgD Pumice.

chD Gilsonite.

ciD Talc and pyrophyllite.

cjD Boron, including borax, kernite and colemanite.

ckD Barite.

cLd Fluorospars.

cmd Feldspar.

cnd Diatomite.

cod Perlite.

cpD Vermiculite.

cqD Mica.

crD Kyanite, including andalusite, sillimanite, topaz and dumortierite.

c110d XNonmetallic mineral processing plantY means any combination of equipment that is used to crush or grind any non-metallic mineral wherever located, including but not limited to lime plants, power plants, steel mills, asphalt concrete plants and portland cement plants.

c111d XOpacityY means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Note: 20% opacity is equal to one unit on the Ringlemann Chart.

c112d XOpen top vapor degreasingY means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

c113d XOperatorY means any person who leases, controls, operates or supervises a facility, an air contaminant source, or air pollution control equipment.

c114d XOrganic compoundY means a compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

c115d XOverall emission reduction efficiencyY 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.

c116d XOzoneY means an allotropic form of oxygen found in the atmosphere which is a photochemical oxidant that oxidizes compounds not readily oxidized by oxygen alone; ozone is a secondary pollutant resulting from the conversion of oxygen in the presence of sunlight and such precursors as volatile organic compounds and nitrogen oxides.

c117d XOzone seasonY means the period from May 1 through September 30 of any year.

c118d XParticulateY or Xparticulate matterY means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

c119d XParticulate matter emissionsY means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by an applicable reference method or an equivalent or alternative method specified by the department.

c120d XParts per millionY or XppmY means parts of a contaminant per million parts of gas by volume.

c121d XPerformance testY means measurements of emissions or other procedures used for the purpose of determining compliance with a standard of performance.

c122d XPermitY means any air pollution control permit issued by the department under s. 285.60, Stats.

c123d XPersonY means any individual, corporation, company, cooperative, operator, 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, interstate agency, federal agency, or any legal successor, representative, agent or agency of the foregoing.

c123ed XPM_{2.5}Y means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured in the ambient air by a reference method based on Appendix L of 40 CFR part 50, incorporated by reference in s. NR 484.04 c6gd, and designated in accordance with 40 CFR part 53, incorporated by reference in s. NR 484.03 c5d, or by an equivalent method.

c123md XPM_{2.5} emissionsY means PM_{2.5} emitted to the ambient air as measured by an applicable reference method or an equivalent or alternative method specified by the department. PM_{2.5} emissions include filterable emissions and gaseous emissions from a source or activity that condense to form particulate matter at ambient temperatures.

c123sd XPM₁₀Y means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured in the ambient air by a reference method based on Appendix J of 40 CFR part 50, incorporated by reference in s. NR 484.04 c5d, and designated in accordance with 40 CFR part 53, incorporated by reference in s. NR 484.03 c5d, or by an equivalent method.

c124d XPM₁₀ emissionsY means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 10 micrometers, emitted to the ambient air as measured by an applicable reference method or an equivalent or alternative method specified by the department. PM₁₀ emissions include filterable emissions and gaseous emissions from a source or activity that condense to form particulate matter at ambient temperatures.

c125d XPortable plantY means, with reference to any non-metallic mineral processing plant, any plant that is mounted on

any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there may be no cable, chain, turnbuckle, bolt or other means, except electrical connections, by which any piece of equipment is attached or clamped to any anchor, slab or structure, including bedrock, that would have to be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

c126d XPortable sourceY 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. A portable source is a type of direct stationary source.

Note: Examples are a portable asphalt plant, a portable package boiler or a portable air curtain destructor.

c127d XPotential to emitY means the maximum capacity of a stationary source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the administrator.

c128d XProcess lineY means one or more actions or unit operations which must function simultaneously or in sequence in order to manufacture or modify a product.

Note: For example, a spray booth, conveyor and drying oven are considered a process line.

c129d XReasonably available control technologyY or XRACTY 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.

c130d XReconstructionY means the removal of components of a stationary source and the substitution of those components with similar new components to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new stationary source. The term XreconstructionY does not apply to minor sources.

c131d XReference methodY means any method of sampling and analyzing for an air pollutant as described in Appendix A of 40 CFR part 60, Appendix B of 40 CFR part 61 or Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04 c13d, c23d, and c25d.

c131md XRegistration permitY means a permit that may be applicable to stationary sources with low actual or potential emissions and is issued in accordance with s. 285.60 c2gd, Stats.

c132d XRelocationY means the removal of a stationary source from one location and the siting of the stationary source at a different location.

c133d XRemediationY means the removal of a contaminant from a solid or liquid material.

c133ed XRemote reservoir cleanerY means a cleaning device in which solvents or solvent solutions are pumped from a container to a sink-like work area and the solvents or solvent solutions from the sink-like area drain into an enclosed container while parts are being cleaned.

c133md XRepair cleaningY means a cleaning operation or activity carried out during a repair process.

c133sd XRepair processY means the process of returning a damaged object or an object not operating properly to good operating condition.

c134d XReplacement of a sourceY means the physical dismantling of a stationary source and the substitution of that source with a stationary source which is similar in operating capacity and function.

c135d XResidual fuel oilY means an industrial fuel oil of grade No. 4, 5 or 6, as determined by the specifications in ASTM D396-02a, incorporated by reference in s. NR 484.10 c8d.

c136d XResponsible officialY means one of the following:
cad For a corporation, one of the following:

1. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function.
2. Any other person who performs similar policy or decision-making functions for the corporation.
3. A duly authorized representative of a person listed in subd. 1. or 2. if the representative is responsible for the overall operation of one or more manufacturing, production or operating facilities applying for or subject to a permit and the representative is approved in advance by the department.

cbd For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

ccd For a municipality, or a state, federal or other public agency: either a principal executive officer or ranking elected official. For the purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency, for example, a regional administrator of EPA.

cdd Notwithstanding pars. cad, cbd and ccd, for affected sources, the designated representative.

c136md XRestricted use RICEY means a stationary RICE that is one of the following:

cad Operated no more than 200 hours per year and that meets the definition of emergency stationary RICE or black start engine in 40 CFR 63.6675.

cbd Operated in accordance with the definition of limited use stationary RICE in 40 CFR 63.6675.

Note: An internal combustion engine that meets the definition of non-road engine in 40 CFR 63.6675 is not a stationary RICE.

c136rd XRICEY means a reciprocating internal combustion engine.

c137d XRinglemann ChartY 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.

Note: One unit on the Ringlemann Chart equals 20% opacity. The Ringlemann Chart is published as Figure 1 in XFundamentals of Smoke Abatement,Y December 1950, bureau of mines Information Circular 7588, which is incorporated by reference in s. NR 484.06 c2d.

c138d XRoadY means the entire width between boundary lines of any way open to the public for vehicular travel.

c139d XRoadwayY has the meaning given it in s. 340.01 c54d, Stats.

c140d XRolling 12 month averageY means, with reference to only ledge rock quarries and industrial sand mines, a monthly average calculated each month by adding the total actual production of the preceding 12 calendar months, and dividing the total by 12. If a new quarry has been in existence for less than 12 calendar months, then the average shall be calculated by adding the total actual production since initial operation, and dividing the total by the number of calendar months subsequent to and including the month of initial operation.

c141d XScreening operationY means a device for separating material according to size by passing undersize material through one or more mesh surfaces, screens or similar surfaces in series,

and retaining oversize material on the mesh surfaces, screens or similar surfaces. Screening operation includes any grizzly, rotating screen or deck type screen. Screening operation does not include washers that are designed to remove unwanted or unnecessary material from the product.

c142d XSecretaryY means the secretary of the department of natural resources, state of Wisconsin.

c143d XSemistationary sourceY means any facility, operation or equipment that has the capability of emitting any air contaminant while moving, but generally does not emit while moving.

Note: Examples are diesel cranes, air compressors and electric generators such as those used at construction sites.

c144d XShutdownY means the cessation of operation of a direct or portable source or of emission control equipment.

c145d XSmokeY 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.

c146d XSolventY means organic materials which are liquid at standard conditions and which are used as solvers, viscosity reducers, or cleaning agents.

c147d XStackY means any device or opening designed or used to emit air contaminants to the ambient air.

c148d XStandard conditionsY means a temperature of 20vC c293 K, 68vFd and a pressure of 760 millimeters of mercury c101.3 kPa, 29.92 in Hgd.

c149d XStandard industrial classification codeY or XSIC codeY means the series of codes which classify facilities according to the type of economic activity in which they are engaged, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05 c1d.

c150d XStandard pressureY means a pressure of 760 millimeters of mercury c29.92 inches of mercuryd.

c151d XStandard temperatureY means a temperature of 20vC c68vFd.

c152d XStartupY means the setting in operation of a facility or its emission control equipment for any purpose which produces emissions.

c153d XStationary sourceY has the meaning given in s. 285.01 c41d, Stats.

c154d XStorage binY means a facility for storage, including surge bins, for nonmetallic minerals prior to further processing or loading.

c155d XTechnological infeasibilityY means incapable of being accomplished or carried out as a matter of practicality; i.e., technically impracticable rather than technically impossible.

c156d XTemperature sensorY means a thermometer or thermocouple used to measure temperature.

c157d XThermal evaporation unitY means any device which uses temperatures greater than 140vF to assist in evaporating organic compounds from soil or water.

c158d XThreshold limit valueY means the airborne concentration of substances, which represents exposure conditions under which it is believed that nearly all workers may be repeatedly exposed to day after day without adverse health effects.

c159d XTotal reduced sulfurY or XTRSY means the sum of any sulfur containing compounds in which the oxidation state of sulfur is less than zero.

Note: Common examples of such compounds are hydrogen sulfide, carbonyl sulfide, dimethyl sulfide, carbon disulfide, dimethyl disulfide and mercaptans.

c160d XTransfer pointY means a point in a conveying operation where a nonmetallic mineral is transferred to or from a belt

conveyor except where the nonmetallic mineral is being transferred to a stockpile from a belt conveyor.

c161d XUncombined waterY means water not chemically or physically bound to another materials.

c162d XVolatile organic compoundY or XVOCY means any organic compound which participates in atmospheric photochemical reactions. This includes any such organic compound other than the following compounds, which have been determined to have negligible photochemical reactivity:

cad Organic compounds excluded for all purposes:

1. Methane.
2. Ethane.
3. Methylene chloride cDichloromethaned.
4. 1,1,1-Trichloroethane cMethyl chloroformd.
5. Trichlorofluoromethane cCFC-11d.
6. Dichlorodifluoromethane cCFC-12d.
7. Chlorodifluoromethane cHCFC-22d.
8. Trifluoromethane cHFC-23d.
9. 1,1,2-Trichloro-1,2,2-trifluoroethane cCFC-113d.
10. 1,2-Dichloro-1,1,2,2-tetrafluoroethane cCFC-114d.
11. Chloropentafluoroethane cCFC-115d.
12. 1,1,1-Trifluoro-2,2-dichloroethane cHCFC-123d.
13. 2-Chloro-1,1,1,2-tetrafluoroethane cHCFC-124d.
14. Pentafluoroethane cHFC-125d.
15. 1,1,2,2-Tetrafluoroethane cHFC-134d.
16. 1,1,1,2-Tetrafluoroethane cHFC-134ad.
17. 1,1-Dichloro-1-fluoroethane cHCFC-141bd.
18. 1-Chloro-1,1-difluoroethane cHCFC-142bd.
19. 1,1,1-Trifluoroethane cHFC-143ad.
20. 1,1-Difluoroethane cHFC-152ad.
21. Parachlorobenzotrifluoride cPCBTfFd.
22. Cyclic, branched or linear completely methylated siloxanes.
23. Acetone.
24. Perchloroethylene cTetrachloroethylened.
25. 3,3-Dichloro-1,1,1,2,2-pentafluoropropane cHCFC-225cad.
26. 1,3-Dichloro-1,1,2,2,3-pentafluoropropane cHCFC-225cbd.
27. 1,1,1,2,3,4,4,5,5-Decafluoropentane cHFC 43-10meed.
28. Difluoromethane cHFC-32d.
29. Ethylfluoride cHFC-161d.
30. 1,1,1,3,3,3-Hexafluoropropane cHFC-236fad.
31. 1,1,2,2,3-Pentafluoropropane cHFC-245cad.
32. 1,1,2,3,3-Pentafluoropropane cHFC-245ead.
33. 1,1,1,2,3-Pentafluoropropane cHFC-245ebd.
34. 1,1,1,3,3-Pentafluoropropane cHFC-245fad.
35. 1,1,1,2,3,3-Hexafluoropropane cHFC-236ead.
36. 1,1,1,3,3-Pentafluorobutane cHFC-365mfcd.
37. Chlorofluoromethane cHCFC-31d.
38. 1-Chloro-1-fluoroethane cHCFC-151ad.
39. 1,2-Dichloro-1,1,2-trifluoroethane cHCFC-123ad.
40. 1,1,1,2,2,3,3,4,4-Nonafluoro-4-methoxybutane $cC_4F_9OCH_3$ or HFE-7100d.
41. 2-cDifluoromethoxymethyl-1,1,1,2,3,3,3-heptafluoropropane $ccCF_3d_2CFCF_2OCH_3d$.
42. 1-Ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane $cC_4F_9OC_2H_5$ or HFE-7200d.

43. 2-cEthoxydifluoromethyl-1,1,1,2,3,3,3-heptafluoropropane $ccCF_3d_2CFCF_2OC_2H_5d$.

44. Methyl acetate.

45. 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane $cn-C_3F_7OCH_3$ or HFE-7000d.

46. 3-Ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-ctrifluoromethyl hexane cHFE-7500d.

47. 1,1,1,2,3,3,3-Heptafluoropropane cHFC 227ead.

48. Methyl formate cHCOOCH₃d.

49. 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane $cC_2F_3CFcOCH_3dCFcCF_3d_2$ or HFE-7300d.

50. Perfluorocarbon compounds which fall into the following classes:

a. Cyclic, branched or linear completely fluorinated alkanes.

b. Cyclic, branched or linear completely fluorinated ethers with no unsaturations.

c. Cyclic, branched or linear completely fluorinated tertiary amines with no unsaturations.

d. Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

51. Dimethyl carbonate $cC_3H_6O_3d$.

52. Propylene carbonate $cC_4H_6O_3d$.

53. Trans-1,3,3,3-tetrafluoropropene cHFO-1234zed.

54. HCF_2OCF_2H cHFE-134d.

55. $HCF_2OCF_2OCF_2H$ cHFE-236cal2d.

56. $HCF_2OCF_2CF_2OCF_2H$ cHFE-338pcc13d.

57. $HCF_2OCF_2OCF_2CF_2OCF_2H$ cH-Galden 1040X or H-Galden ZT 130 cor 150 or 180dd.

58. Trans-1-chloro-3,3,3-trifluoroprop-1-ene cSolstice™ 1233zdcEdd.

59. 2,3,3,3-tetrafluoropropene cHFO-1234yfd.

60. 2-amino-2-methyl-1-propanol cAMP; CAS number 124-68-5d.

61. 1,1,2,2-tetrafluoro-1-c2,2,2-trifluoroethoxyd ethane cHFE-347pcf2d.

62. *cis*-1,1,1,4,4,4-hexafluorobut-2-ene cHFO-1336mzz-Zd.

cbd The following compound is subject to all recordkeeping, emissions reporting, photochemical dispersion modeling, inventory requirements and emissions fees which apply to VOCs and shall be uniquely identified in emission reports, but is not considered a VOC for purposes of VOC emissions limitations or VOC content requirements: t-butyl acetate.

Note: The test methods used to measure VOC are specified in s. NR 439.06 c3d.

c163d XYearY or XyearlyY means any consecutive 12-month period of time.

History: Renum. from NR 154.01 and am. c1d, c2d, c3d, c94d and c96d, cr. c7d, c8d, c17d, c18d, c32d, c34d, c53d and c60d, c64d renum. from NR 404.01 c7d, Register, September, 1986, No. 369, eff. 10-1-86; cr. c46md, Register, January, 1987, No. 373, eff. 2-1-87; am. c66d, Register, September, 1987, No. 381, eff. 10-1-87; emerg. am. c66d, eff. 10-1-87; r. c14d and c91d, cr. c47ed, c55ed and c80sd, am. c59d and c69d, renum. c98d to be NR 406.02 c12d; c5ed, c17md, c43md, c46sd, c53ed and c53sd renum. from NR 410.02 c1d, NR 406.02 c3d, c4d and c6d and NR 410.02 c4d and c5d and am. c46sd, Register, April, 1988, No. 388, eff. 5-1-88; am. c66d, renum. c77d to be NR 445.02 c9md, cr. c66md, c69md and c77d, Register, December, 1988, No. 396, eff. 1-1-89; r. c1d, c22d, c25d, c30d, c43d, c47d, c48d, c52d, c73d and c85d, am. c2d, c3d, c5ed, c8d, c17d, c18d, c32d, c34d, c40d, c45d, c53d, c55d, c60d, c70d, c77d, c95d, c96d and c100d, c11md, c16ed, c21ed, c21md, c22d, c26md, c51md and c72d renum. from NR 420.02 c3d, c4d, c7d, 422.02 c6d, 421.02 c2d, 420.02 c12d, 421.02 c5d and 419.02 c5d renum. c36d, c71d and c72d to be NR 422.02 c12sd, 420.02 c29md and 420.02 c29pd, Register, February, 1990, No. 410, eff. 3-1-90; c4md and c43d renum. from NR 440.02 c4d and 440.64 c2d cdd, Register, September, 1990, No. 417, eff. 10-1-90; am. c4d, c26d, c31d, c66d and c80d, cr. c78md and c98d, renum. c16d to be NR 406.02 c1d, Register, August, 1991, No. 428, eff. 9-1-91; am. c50d, r. c13d, c5sd, c60md, c80md and c98md, renum. from NR 404.02 c1d, NR 415.02 c4d and c7d, NR 429.02 c2d and am., renum. c46sd, c47ed and c51md to be c47d, c48d and c52d, c37d, c82d, c92d and c101d to be NR 417.02 c1d, 449.02 c10md, c11md and c18d, Register, May, 1992, No. 437, eff. 6-1-92; emerg. am. c55d, eff. 11-15-92; c39md renum. from NR

405.02 c14d and am., cr. c43ed and c53md, r. c53ed, r. and recr. c55d, am. c100d, Register, May, 1993, No. 449, eff. 6-1-93; cr. c1d, c1jd, c26ed and c91d, c59md renum. from NR 101.03 c13d and am., Register, June, 1993, No. 450, eff. 7-1-93; cr. c1bd, c1ed, c1md, c1qd, c8md, c11qd, c28md, c30d, c36d, c43bd, c53ed, c68md, c71d and c80ed, am. c53md, Register, December, 1993, No. 456, eff. 1-1-94; cr. c1kd, c1Ld, c17sd, c21ed, c21kd, c26sd, c40ed, c47md, c51md, c60ed, c60id, c69sd, c81md, c96md and c98sd, Register, June, 1994, No. 462, eff. 7-1-94; cr. c98gd, Register, December, 1994, No. 468, eff. 1-1-95; am. c43ed, c47md, c51md, c77d, c80d and c91d, Register, February, 1995, No. 470, eff. 3-1-95; renum. c1d to c1ad, renum. c1d, c1cd, c1vd from NR 407.02 c1d, c2d, c4d, am. c1bd, c1qd, c39md, r. c11md, c15d, c16ed, c21d, c36d, c49d, c74d, cr. c22ed, c22md, c40md, c40sd, c41md, c57md, Register, April, 1995, No. 472, eff. 5-1-95; cr. c18md, c22sd, c97md and c101d, am. c47d and c54d, Register, June, 1995, No. 474, eff. 7-1-95; am. c98d, Register, August, 1995, No. 476, eff. 9-1-95; am. c41d, c77d, c79d and c90d, c53pd renum. from NR 411.02 c6d, r. c60md, c60md renum. from NR 440.02 c21d, renum. c100d cud to be c100d cwd, cr. c100d cud and cvd, Register, December, 1995, No. 480, eff. 1-1-96; am. c43ed, c80ed cad cintro.d, renum. c100d cwd to be c100d cxd, cr. c100d cwd, Register, June, 1996, No. 486, eff. 7-1-96; am. c39md, Register, December, 1996, No. 492, eff. 1-1-97; corrections made under s. 13.93 c2md cbd 7., Stats., Register, December, 1996, No. 492; am. c43cd and c43dd, renum. s. NR 423.02 c3d c3md, c4d and c8d to be s. NR 400.02 c22vd, c26od c26qd and c60sd, Register, March, 1997, No. 495, eff. 4-1-97; renum. c43bd to be c43ad, cr. c43bd, Register, December, 1997, No. 504, eff. 1-1-98; renum. c1ad to c99d, c100d cintro.d and cad to cxd and c101d to be c2d to c162d cintro.d and cad to ctd and c163d and am. and renumbered, c40d, c55d, c70d, c77d, c122d, c124d, c126d, c131d and c139d, cr. c74d, c78d, c87d, c162d cxd, cxad, cxbd, cxcd, cxd, cxfd, cxgd, cxhd, cxid, cxjd, cxkd, cxLd, cxmd, cxnd, cxod, cxpd, cxqd, cxrd and cyd, am. c3d, Register, October, 1999, No. 526, eff. 11-1-99; cr. c36md, Register, August, 2000, No. 536, eff. 9-1-00; cr. c45md, Register, January, 2001, No. 541, eff. 2-1-01; corrections made under s. 13.93 c2md cbd 7., Stats., Register, January, 2001, No. 541; CR 02-146: am. c40d, c70d, c79d and c135d Register October 2003 No. 574, eff. 11-1-03; CR 02-097: am. c95d, cr. c162d cwmd, renum. NR 445.02 c1d to be NR 400.02 c27md Register June 2004 No. 582, eff. 7-1-04; CR 01-081: am c64d Register September 2004 No. 585, eff. 10-1-04; CR 03-066: renum. NR 404.02 c2d to be c19md Register May 2005 No. 593, eff. 6-1-05; CR 04-107: cr. c73md and c131md Register August 2005 No. 596, eff. 9-1-05; CR 04-106: am c64d Register November 2005 No. 599, eff. 12-1-05; CR 05-055: renum. c162d cad to be cad 1., cr. c162d cad cintro.d and 45. to 48. and c162d cbd, renum. c162d cbd to cyd to be c162d cad 2. to 44. and am. 40. and 42., renum. c162d czd to be c162d cad 49. Register December 2005 No. 600, eff. 1-1-06; CR 07-040: renum. c162d cad 49. to be c162d cad 50., cr. c162d cad 49. Register April 2008 No. 628, eff. 5-1-08; CR 10-012: cr. c162d cad 51. and 52. Register September 2010 No. 657, eff. 10-1-10; CR 10-048: cr. c66md Register November 2010 No. 659, eff. 12-1-10; CR 10-050: c123ed, c123sd renum. from NR 404.02 c4ed, c4md and am., am. c40d, c70d, c79d, c135d, cr. c123md Register November 2010 No. 659, eff. 12-1-10; EmR1046: emerg. cr. c74md, eff. 12-15-10; CR 10-144: cr. c74md Register August 2011 No. 668, eff. 9-1-11; CR 11-005: cr. c26md, c54md, c85md, c93md, c107md, c133ed, c133md, c133sd renum. from 423.02 c1d, c8d, c8Ld, c8td, c9ed, c9nd, c9rd Register January 2012 No. 673, eff. 2-1-12; correction in c64d made under s. 13.92 c4d cbd 7., Stats., Register March 2012 No. 675; CR 13-070: r. c101d, c106d, am. c123md, c124d Register July 2014 No. 703, eff. 8-1-14; CR 15-005: r. c56d, cr. c136md Register November 2015 No. 719, eff. 12-1-15; CR 15-077: cr. c162d cad 53. to 60. Register July 2016 No. 727, eff. 8-1-16; CR 19-015: am. c130d, c136md cintro.d, cbd, cr. c136rd, c162d cad 61., 62. September 2020 No. 777, eff. 10-1-20; CR 20-088: cr. cintro.d Register May 2022 No. 797, eff. 6-1-22.

NR 400.03 Units and abbreviations. Abbreviations and symbols of units of measure used in chs. NR 400 to 499 are defined as follows:

c1d System international cSI units of measure:

cad XAY — ampere
 camd XgY — gram
 cbd XHzY — hertz
 cbmd XJY — joule
 ccd XKY — degree Kelvin
 ccmd XkgY — kilogram
 cdd XkPaY — kilo pascal c1.0 kPa = 0.15 psiad
 cdmd XmY — meter
 ced Xm^{2Y} — square meter
 cemd Xm^{3Y} — cubic meter
 cfd XmgY — milligram—10⁻³ gram
 cfmd XMgY — megagram—10⁶ gram
 cgd XmmY — millimeter—10⁻³ meter
 cgmd XmolY — mole
 chd XMWY — megawatt
 chmd XMWeY — megawatt electrical
 cid XNY — newton
 cimd XngY — nanogram—10⁹ gram

cjd XnmY — nanometer—10⁹ meter
 cjmd XPaY — pascal
 ckd XsY — second
 ckmd XVY — volt
 cLd XWY — watt
 cLmd XµgY — microgram—10⁶ gram
 cmd XΩY — ohm
c2d Other units of measure:
 cad XBtuY — British thermal unit
 camd XvCY — degree Celsius ccentigraded
 cbd XccY — cubic centimeters
 cbmd XcfmY — cubic feet per minute
 ccd XCiY — curie
 ccmd XdY — day
 cdd XdcfY — dry cubic feet
 cdmd XdemY — dry cubic meters
 ced XdscfY — dry cubic feet at standard conditions
 cemd XdscmY — dry cubic meters at standard conditions
 cfd XeqY — equivalent
 cfmd XvFY — degree Fahrenheit
 cgd XftY — foot
 cgmd Xft^{2Y} — square feet
 chd Xft^{3Y} — cubic feet
 chmd XgalY — gallon
 cid XgrY — grain
 cimd XhrY — hour
 cjd XinY or — inch
 cjmd Xin HgY — inches of mercury
 ckd Xin H₂OY — inches of water
 ckmd XIY — liter
 cLd XlbY — pound
 cLmd XlpmY — liter per minute
 cmd XmilY — 10⁻³ in
 cmmd XminY — minute
 cnd XmlY — milliliter — 10⁻³ liter
 cnmd XmmBtuY — million Btu
 cnsd XMPHY — miles per hour
 cod XmremY — millirem — 10⁻³ rem
 comd XozY — ounce
 cpd XpCiY — picocurie — 10⁻¹² curie
 cpmd XppmY or XppmVY — parts per million cby volumed
 cqd XpsiaY — pounds per square inch absolute
 cqmd XpsigY — pounds per square inch gauge
 crd XvRY — degree Rankine
 crgd XtpyY — tons per year
 crmd Xv{vY — volume per volume
 csd Xyd^{2Y} — square yards
 csmd XyrY — year
 ctd XµlY — microliter—10⁶ liter
 ctmd XµmY — micrometer—10⁶ meter cmicron
c3d Chemical nomenclature:
 cad XBeY — beryllium
 cbd XCdSY — cadmium sulfide
 ccd XCOY — carbon monoxide
 cdd XCO₂Y — carbon dioxide
 ced XHClY — hydrochloric acid
 cfd XHgY — mercury

- cgd XH_2OY — water
 chd XH_2SY — hydrogen sulfide
 cid XH_2SO_4Y — sulfuric acid
 cjd XN_2Y — nitrogen
 ckd $XNOY$ — nitric oxide
 cLd XNO_2Y — nitrogen dioxide
 cmd XNO_xY — nitrogen oxides
 cnd XO_2Y — oxygen
 cod $XPbY$ — lead
 comd XSF_6Y — sulfur hexafluoride
 cpd XSO_2Y — sulfur dioxide
 cqd XSO_3Y — sulfur trioxide
 crd XSO_xY — sulfur oxides
c4d Miscellaneous:
 cad $XAPIY$ — American Petroleum Institute, 1220 L Street NW, Washington DC 20005
 camd $XAQCRY$ — air quality control region
 cbd $XASMEY$ — American Society of Mechanical Engineers, 22 Law Drive, Fairfield, NJ 07007-2900
 cbmd $XASTMY$ — American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959
 ccd $XavgY$ — average
 ccmd $XBACTY$ — best available control technology
 ccsd $XCAS$ no.Y — Chemical Abstracts Service registry number
 cdd $XCEMY$ — continuous emission monitor
 cdgd $XCERCLAY$ — federal comprehensive environmental response, compensation and liability act
 cdmd $XCFCY$ — chlorofluorocarbon
 ced $XCFRY$ — code of federal regulations
 cemd $XDOEY$ — United States department of energy
 cfd $XEPAY$ — United States environmental protection agency
 cfmd $XFCY$ — fluorocarbon
 cgd $XFRY$ — federal register
 cgmd $XGACTY$ — generally available control technology
 cgod $XGHGY$ — greenhouse gases
 cgsd $XHAPY$ — hazardous air pollutant
 chd $XHCFCY$ — hydrochlorofluorocarbon
 chmd $XHFCY$ — hydrofluorocarbon
 cid $XI.D.Y$ — inside diameter
 cimd $XLAERY$ — lowest achievable emission rate
 cjd $XMACTY$ — maximum achievable control technology
 cjmd $XMSDSY$ — material safety data sheet
 cjpd $XNAICSY$ — North American Industry Classification System
 cjsd $XNESHAPY$ — national emission standards for hazardous air pollutants
 ckd $XO.D.Y$ — outside diameter
 cked $XOSHAY$ — United States occupational safety and health administration
 ckgd $XPFCY$ — perfluorocarbon
 ckid $XPM_{2.5}Y$ — particulate matter with an aerodynamic diameter $\leq 2.5 \mu m$
 ckmd $XPM_{10}Y$ — particulate matter with an aerodynamic diameter $\leq 10 \mu m$
 ckdsd $XPSDY$ — prevention of significant deterioration
 cLd $XRACTY$ — reasonably available control technology
 cLmd $XrpmY$ — revolutions per minute
 cmd $XSICY$ — standard industrial classification
 cmfd $XSIPY$ — state implementation plan
 cmmd $XTRSY$ — total reduced sulfur
 cnd $XTSPY$ — total suspended particulates
 cnmd $XUSCY$ — United States Code
 cod $XVOCY$ — volatile organic compound
 comd $X\geq Y$ — greater than or equal to
 cpd $X\leq Y$ — less than or equal to
 cpmd $X\%Y$ — percent
 cqd XoY — plus or minus
History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; am. c2d, Register, December, 1995, No. 480, eff. 1-1-96; correction made under s. 13.93 c2md cbd 1., Stats., Register, December, 1995, No. 480; cr. c4d ccsd and cgsd, Register, March, 1997, No. 495, eff. 4-1-97; cr. c4d cked, Register, September, 1997, No. 501, eff. 10-1-97; cr. c2d cnsd, crgd, c4d cdgd and ckdsd, Register, October, 1999, No. 526, eff. 11-1-99; CR 05-040: cr. c4d cjsd Register February 2006 No. 602, eff. 3-1-06; CR 10-050: cr. c4d ckid Register November 2010 No. 659, eff. 12-1-10; EmR1046: emerg. cr. c3d comd, c4d cgod, ckgd, eff. 12-15-10; CR 10-144: cr. c3d comd, c4d cgod, ckgd Register August 2011 No. 668, eff. 9-1-11; CR 21-072: cr. c4d cjpd Register July 2022 No. 799, eff. 8-1-22; CR 23-017: cr. c4d cmfd Register March 2024 No. 819, eff. 4-1-24.