

CHAPTER 23  
EMISSION STANDARDS FOR CONTAMINANTS

[Prior to 7/1/83, DEQ Ch 4]

[Prior to 12/3/86, Water, Air and Waste Management[900]]

**567—23.1(455B) Emission standards.**

**23.1(1) *In general.*** The federal standards of performance for new stationary sources (new source performance standards) shall be applicable as specified in subrule 23.1(2). The federal standards for hazardous air pollutants (national emission standards for hazardous air pollutants) shall be applicable as specified in subrule 23.1(3). The federal standards for hazardous air pollutants for source categories (national emission standards for hazardous air pollutants for source categories) shall be applicable as specified in subrule 23.1(4). The federal emission guidelines (emission guidelines) shall be applicable as specified in subrule 23.1(5). Compliance with emission standards specified elsewhere in this chapter shall be in accordance with 567—Chapter 21.

**23.1(2) *New source performance standards.*** The federal standards of performance for new stationary sources, as defined in 40 Code of Federal Regulations Part 60 as amended or corrected through June 2, 2008, are adopted by reference, except § 60.530 through § 60.539b (Part 60, Subpart AAA), and shall apply to the following affected facilities. The corresponding 40 CFR Part 60 subpart designation is in parentheses. Reference test methods (Appendix A), performance specifications (Appendix B), determination of emission rate change (Appendix C), quality assurance procedures (Appendix F) and the general provisions (Subpart A) of 40 CFR Part 60 also apply to the affected facilities.

*a. Fossil fuel-fired steam generators.* A fossil fuel-fired steam generating unit of more than 250 million Btu heat input for which construction, reconstruction, or modification is commenced after August 17, 1971. Any facility covered under paragraph “z” is not covered under this paragraph. (Subpart D)

*b. Incinerators.* An incinerator of more than 50 tons per day charging rate. (Subpart E)

*c. Portland cement plants.* Any of the following in a Portland cement plant: kiln; clinker cooler; raw mill system; finish mill system; raw mill dryer; raw material storage; clinker storage; finished product storage; conveyor transfer points; bagging and bulk loading and unloading systems. (Subpart F)

*d. Nitric acid plants.* A nitric acid production unit. (Subpart G)

*e. Sulfuric acid plants.* A sulfuric acid production unit. (Subpart H)

*f. Asphalt concrete plants.* An asphalt concrete plant. (Subpart I)

*g. Petroleum refineries.* Any of the following at a petroleum refinery: fluid catalytic cracking unit catalyst regenerator; fluid catalytic cracking unit incinerator-waste heat boilers; fuel gas combustion devices; and claus sulfur recovery plants greater than 20 long tons per day. (Subpart J)

*h. Secondary lead smelters.* Any of the following in a secondary lead smelter: pot furnaces of more than 250 kilograms (550 pounds) charging capacity; blast (cupola) furnaces; and reverberatory furnaces. (Subpart L)

*i. Secondary brass and bronze ingot production plants.* Any of the following at a secondary brass and bronze ingot production plant; reverberatory and electric furnaces of 1000/kilograms (2205 pounds) or greater production capacity and blast (cupola) furnaces of 250 kilograms per hour (550 pounds per hour) or greater production capacity. (Subpart M)

*j. Iron and steel plants.* A basic oxygen process furnace. (Subpart N)

*k. Sewage treatment plants.* An incinerator which burns the sludge produced by municipal sewage treatment plants. (Subpart O of 40 CFR 60 and Subpart E of 40 CFR 503.)

*l. Steel plants.* Either of the following at a steel plant: electric arc furnaces and dust-handling equipment, the construction, modification, or reconstruction of which commenced after October 21, 1974, and on or before August 17, 1983. (Subpart AA)

*m. Primary copper smelters.* Any of the following at a primary copper smelter: dryer, roaster, smelting furnace and copper converter. (Subpart P)

*n. Primary zinc smelters.* Either of the following at a primary zinc smelter: a roaster or a sintering machine. (Subpart Q)

*o. Primary lead smelter.* Any of the following at a primary lead smelter: sintering machine, sintering machine discharge end, blast furnace, dross reverberatory furnace, converter and electric smelting furnace. (Subpart R)

*p. Primary aluminum reduction plants.* Either of the following at a primary aluminum reduction plant: potroom groups and anode bake plants. (Subpart S)

*q. Wet process phosphoric acid plants in the phosphate fertilizer industry.* A wet process phosphoric acid plant, which includes any combination of the following: reactors, filters, evaporators and hotwells. (Subpart T)

*r. Superphosphoric acid plants in the phosphate fertilizer industry.* A superphosphoric acid plant which includes any combination of the following: evaporators, hotwells, acid sumps, and cooling tanks. (Subpart U)

*s. Diammonium phosphate plants in the phosphate fertilizer industry.* A granular diammonium phosphate plant which includes any combination of the following: reactors, granulators, dryers, coolers, screens and mills. (Subpart V)

*t. Triple super phosphate plants in the phosphate fertilizer industry.* A triple super phosphate plant which includes any combination of the following: mixers, curing belts (dens), reactors, granulators, dryers, cookers, screens, mills and facilities which store run-of-pile triple superphosphate. (Subpart W)

*u. Granular triple superphosphate storage facilities in the phosphate fertilizer industry.* A granular triple superphosphate storage facility which includes any combination of the following: storage or curing piles, conveyors, elevators, screens and mills. (Subpart X)

*v. Coal preparation plants.* Any of the following at a coal preparation plant which processes more than 200 tons per day: thermal dryers; pneumatic coal cleaning equipment (air tables); coal processing and conveying equipment (including breakers and crushers); coal storage systems; and coal transfer and loading systems. (Subpart Y)

*w. Ferroalloy production.* Any of the following: electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome, standard ferromanganese, silicomanganese, ferromanganese silicon, or calcium carbide; and dust-handling equipment. (Subpart Z)

*x. Kraft pulp mills.* Any of the following in a kraft pulp mill: digester system; brown stock washer system; multiple effect evaporator system; black liquor oxidation system; recovery furnace; smelt dissolving tank; lime kiln; and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of the standard of performance are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation. (Subpart BB)

*y. Lime manufacturing plants.* A rotary lime kiln or a lime hydrator used in the manufacture of lime at other than a kraft pulp mill. (Subpart HH)

*z. Electric utility steam generating units.* An electric utility steam generating unit that is capable of combusting more than 250 million Btus per hour (73 megawatts) heat input of fossil fuel for which construction or modification or reconstruction is commenced after September 18, 1978, or an electric utility combined cycle gas turbine that is capable of combusting more than 250 million Btus per hour (73 megawatts) heat input. An electric utility steam generating unit is any fossil fuel-fired combustion unit of more than 25 megawatts electric (MW) that serves a generator that produces electricity for sale. A unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MW output to any utility power distribution system for sale is also an electric utility steam generating unit. This standard also includes a provision for mercury emissions for any coal-fired electric utility steam generating unit other than an integrated gasification combined cycle electric steam generating unit, for which construction or reconstruction commenced after January 30, 2004. (Subpart Da)

*aa. Stationary gas turbines.* Any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self-propelled. It may, however, be mounted on a vehicle for portability. (Subpart GG)

*bb. Petroleum storage vessels.* Unless exempted, any storage vessel for petroleum liquids for which the construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978, having a storage capacity greater than 151,412 liters (40,000 gallons). (Subpart K)

*cc. Petroleum storage vessels.* Unless exempted, any storage vessel for petroleum liquids for which the construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984, having a storage capacity greater than 151,416 liters (40,000 gallons). (Subpart Ka)

*dd. Glass manufacturing plants.* Any glass melting furnace. (Subpart CC)

*ee. Automobile and light-duty truck surface coating operations at assembly plants.* Any of the following in an automobile or light-duty truck assembly plant: prime coat operations, guide coat operations, and topcoat operations. (Subpart MM)

*ff. Ammonium sulfate manufacture.* Any of the following in the ammonium sulfate industry: ammonium sulfate dryers in the caprolactam by-product, synthetic, and coke oven by-product sectors of the industry. (Subpart PP)

*gg. Surface coating of metal furniture.* Any metal furniture surface coating operation in which organic coatings are applied. (Subpart EE)

*hh. Lead-acid battery manufacturing plants.* Any lead-acid battery manufacturing plant which uses any of the following: grid casting, paste mixing, three-process operation, lead oxide manufacturing, lead reclamation, other lead-emitting operations. (Subpart KK)

*ii. Phosphate rock plants.* Any phosphate rock plant which has a maximum plant production capacity greater than four tons per hour including the following: dryers, calciners, grinders, and ground rock handling and storage facilities, except those facilities producing or preparing phosphate rock solely for consumption in elemental phosphorus production. (Subpart NN)

*jj. Graphic arts industry.* Publication rotogravure printing. Any publication rotogravure printing press except proof presses. (Subpart QQ)

*kk. Industrial surface coating — large appliances.* Any surface coating operation in a large appliance surface coating line. (Subpart SS)

*ll. Metal coil surface coating.* Any of the following at a metal coil surface coating operation: prime coat operation, finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet-on-wet over the prime coat and both coatings are cured simultaneously. (Subpart TT)

*mm. Asphalt processing and asphalt roofing manufacturing.* Any saturator, mineral handling and storage facility at asphalt roofing plants; and any asphalt storage tank and any blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants. (Subpart UU)

*nn. Equipment leaks of volatile organic compounds (VOC) in the synthetic organic chemicals manufacturing industry.* Standards for affected facilities in the synthetic organic chemicals manufacturing industry (SOCMI) that commenced construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006, are set forth in Subpart VV. Standards for affected SOCMI facilities that commenced construction, reconstruction or modification after November 7, 2006, are set forth in Subpart VVa. The standards apply to pumps, compressors, pressure relief devices, sampling systems, open-ended valves or lines (OEL), valves, and flanges or other connectors which handle VOC. (Subpart VV and Subpart VVa)

*oo. Beverage can surface coating.* Any beverage can surface coating lines for two-piece steel or aluminum containers in which soft drinks or beer are sold. (Subpart WW)

*pp. Bulk gasoline terminals.* The total of all loading racks at bulk gasoline terminals which deliver liquid product into gasoline tank trucks. (Subpart XX)

*qq. Pressure sensitive tape and label surface coating operations.* Any coating line used in the tape manufacture of pressure sensitive tape and label materials. (Subpart RR)

*rr. Metallic mineral processing plants.* Any ore processing and handling equipment. (Subpart LL)

*ss. Synthetic fiber production facilities.* Any solvent-spun synthetic fiber process that produces more than 500 megagrams of fiber per year. (Subpart HHH)

*tt. Equipment leaks of VOC in petroleum refineries.* A compressor and all equipment (defined in 40 CFR, Part 60.591) within a process unit for which the construction, reconstruction, or modification commenced after January 4, 1983. (Subpart GGG)

*uu. Flexible vinyl and urethane coating and printing.* Each rotogravure printing line used to print or coat flexible vinyl or urethane products. (Subpart FFF)

*vv. Petroleum dry cleaners.* Petroleum dry-cleaning plant with a total manufacturer's rated dryer capacity equal to or greater than 38 kilograms (84 pounds): petroleum solvent dry-cleaning dryers, washers, filters, stills, and settling tanks. (Subpart JJJ)

*ww. Electric arc furnaces and argon-oxygen decarburization vessels constructed after August 17, 1983.* Steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems. (Subpart AAa)

*xx. Wool fiberglass insulation manufacturing plants.* Rotary spin wool fiberglass manufacturing line. (Subpart PPP)

*yy. Iron and steel plants.* Secondary emissions from basic oxygen process steelmaking facilities for which construction, reconstruction, or modification commenced after January 20, 1983. (Subpart Na)

*zz. Equipment leaks of VOC from on-shore natural gas processing plants.* A compressor and all equipment defined in 40 CFR, Part 60.631, unless exempted, for which construction, reconstruction, or modification commenced after January 20, 1984. (Subpart KKK)

*aaa. On-shore natural gas processing: SO<sub>2</sub> emissions.* Unless exempted, each sweetening unit and each sweetening unit followed by a sulfur recovery unit for which construction, reconstruction, or modification commenced after January 20, 1984. (Subpart LLL)

*bbb. Nonmetallic mineral processing plants.* Unless exempted, each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or rail car loading station in fixed or portable nonmetallic mineral processing plants for which construction, reconstruction, or modification commenced after August 31, 1983. (Subpart OOO)

*ccc. Industrial-commercial-institutional steam generating units.* Unless exempted, each steam generating unit for which construction, reconstruction, or modification commenced after June 19, 1984, and which has a heat input capacity of more than 100 million Btu/hour. (Subpart Db)

*ddd. Volatile organic liquid storage vessels.* Unless exempted, volatile organic liquid storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984. (Subpart Kb)

*eee. Rubber tire manufacturing plants.* Unless exempted, each undertread cementing operation, each sidewall cementing operation, each tread end cementing operation, each bead cementing operation, each green tire spraying operation, each Michelin-A operation, each Michelin-B operation, and each Michelin-C automatic operation that commences construction or modification after January 20, 1983. (Subpart BBB)

*fff. Industrial surface coating: surface coating of plastic parts for business machines.* Each spray booth in which plastic parts for use in the manufacture of business machines receive prime coats, color coats, texture coats, or touch-up coats for which construction, modification, or reconstruction begins after January 8, 1986. (Subpart TTT)

*ggg. VOC emissions from petroleum refinery wastewater systems.* Each individual drain system, each oil-water separator, and each aggregate facility for which construction, modification or reconstruction is commenced after May 4, 1987. (Subpart QQQ)

*hhh. Magnetic tape coating facilities.* Unless exempted, each coating operation and each piece of coating mix preparation equipment for which construction, modification, or reconstruction is commenced after January 22, 1986. (Subpart SSS)

*iii. Polymeric coating of supporting substrates.* Unless exempted, each coating operation and any on-site coating mix preparation equipment used to prepare coatings for the polymeric coating of supporting substrates for which construction, modification, or reconstruction begins after April 30, 1987. (Subpart VVV)

*jjj. VOC emissions from synthetic organic chemical manufacturing industry air oxidation unit processes.* Unless exempted, any air oxidation reactor, air oxidation reactor and recovery system or combination of two or more reactors and the common recovery system used in the production of any of the chemicals listed in 40 CFR §60.617 for which construction, modification or reconstruction commenced after October 21, 1983. (Subpart III)

*kkk. VOC emissions from synthetic organic chemical manufacturing industry distillation operations.* Unless exempted, any distillation unit, distillation unit and recovery system or combination of two or more distillation units and the common recovery system used in the production of any of the chemicals listed in 40 CFR §60.667 for which construction, modification or reconstruction commenced after December 30, 1983. (Subpart NNN)

*lll. Small industrial-commercial-institutional steam generating units.* Each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 100 million Btu per hour or less, but greater than or equal to 10 million Btu per hour. (Subpart Dc)

*mmm. VOC emissions from the polymer manufacturing industry.* Each of the following process sections in the manufacture of polypropylene and polyethylene—raw materials preparation, polymerization reaction, material recovery, product finishing, and product storage; each material recovery section of polystyrene manufacturing using a continuous process; each polymerization reaction section of poly(ethylene terephthalate) manufacturing using a continuous process; each material recovery section of poly(ethylene terephthalate) manufacturing using a continuous process that uses dimethyl terephthalate; each raw material section of poly(ethylene terephthalate) manufacturing using a continuous process that uses terephthalic acid; and each group of fugitive emissions equipment within any process unit in the manufacturing of polypropylene, polyethylene, or polystyrene (including expandable polystyrene). The applicability date for construction, modification or reconstruction for polystyrene and poly(ethylene terephthalate) affected facilities and some polypropylene and polyethylene affected facilities is September 30, 1987. For the other polypropylene and polyethylene affected facilities the applicability date for these regulations is January 10, 1989. (Subpart DDD)

*nnn. Municipal waste combustors.* Unless exempted, a municipal waste combustor with a capacity greater than 225 megagrams per day of municipal solid waste for which construction is commenced after December 20, 1989, and on or before September 20, 1994, and modification or reconstruction is commenced after December 20, 1989, and on or before June 19, 1996. (Subpart Ea)

*ooo. Grain elevators.* A grain terminal elevator or any grain storage elevator except as provided under 40 CFR 60.304(b), August 31, 1993. A grain terminal elevator means any grain elevator which has a permanent storage capacity of more than 2.5 million U.S. bushels except those located at animal food manufacturers, pet food manufacturers, cereal manufacturers, breweries, and livestock feedlots. A grain storage elevator means any grain elevator located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant which has a permanent grain storage capacity of 1 million bushels. Any construction, modification, or reconstruction after August 3, 1978, is subject to this paragraph. (Subpart DD)

*ppp. Mineral processing plants.* Each calciner and dryer at a mineral processing plant unless excluded for which construction, modification, or reconstruction is commenced after April 23, 1986. (Subpart UUU)

*qqq. VOC emissions from synthetic organic chemical manufacturing industry reactor processes.* Unless exempted, each affected facility that is part of a process unit that produces any of the chemicals listed in 40 CFR §60.707 as a product, coproduct, by-product, or intermediate for which construction, modification, or reconstruction commenced after June 29, 1990. Affected facility is each reactor process not discharging its vent stream into a recovery system, each combination of a reactor process and the recovery system into which its vent stream is discharged, or each combination of two or more reactor processes and the common recovery system into which their vent streams are discharged. (Subpart RRR)

*rrr. Municipal solid waste landfills, as defined by 40 CFR 60.751.* Each municipal solid waste landfill that commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991, must comply. (Subpart WWW)

*sss. Municipal waste combustors.* Unless exempted, a municipal waste combustor with a capacity greater than 35 megagrams per day of municipal solid waste for which construction is completed after September 20, 1994, or for which modification or reconstruction is commenced after June 19, 1996. (Subpart Eb)

*ttt. Hospital/medical/infectious waste incinerators.* Unless exempted, a hospital/medical/infectious waste incinerator for which construction is commenced after June 20, 1996, or for which modification is commenced after March 16, 1998. (Subpart Ec)

*uuu. New small municipal waste combustion units.* Unless exempted, this standard applies to a small municipal waste combustion unit that commenced construction after August 30, 1999, or small municipal waste combustion units that commenced reconstruction or modification after June 6, 2001. (Part 60, Subpart AAAA)

*vvv. Commercial and industrial solid waste incineration.* Unless exempted, this standard applies to units for which construction is commenced after November 30, 1999, or for which modification or reconstruction is commenced on or after June 1, 2001. (Part 60, Subpart CCCC)

*www. Other solid waste incineration (OSWI) units.* Unless exempted, this standard applies to other solid waste incineration (OSWI) units for which construction is commenced after December 9, 2004, or for which modification or reconstruction is commenced on or after June 16, 2006. (Part 60, Subpart EEEE)

*xxx.* Reserved.

*yyy. Stationary compression ignition internal combustion engines.* Unless otherwise exempted, these standards apply to each stationary compression ignition internal combustion engine whose construction, modification or reconstruction commenced after July 11, 2005. (Part 60, Subpart IIII)

*zzz. Stationary spark ignition internal combustion engines.* These standards apply to each stationary spark ignition internal combustion engine whose construction, modification or reconstruction commenced after June 12, 2006. (Part 60, Subpart JJJJ)

*aaaa. Stationary combustion turbines.* Unless otherwise exempted, these standards apply to stationary combustion turbines with a heat input at peak load equal to or greater than 10 MMBtu per hour, based on the higher heating value of the fuel, that commence construction, modification, or reconstruction after February 18, 2005. (Part 60, Subpart KKKK)

**23.1(3) Emission standards for hazardous air pollutants.** The federal standards for emissions of hazardous air pollutants, 40 Code of Federal Regulations Part 61 as amended or corrected through May 16, 2007, and 40 CFR Part 503 as adopted on August 4, 1999, are adopted by reference, except 40 CFR §61.20 to §61.26, §61.90 to §61.97, §61.100 to §61.108, §61.120 to §61.127, §61.190 to §61.193, §61.200 to §61.205, §61.220 to §61.225, and §61.250 to §61.256, and shall apply to the following affected pollutants and facilities and activities listed below. The corresponding 40 CFR Part 61 subpart designation is in parentheses. Reference test methods (Appendix B), compliance status information requirements (Appendix A), quality assurance procedures (Appendix C) and the general provisions (Subpart A) of Part 61 also apply to the affected activities or facilities.

*a. Asbestos.* Any of the following involves asbestos emissions: asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications and demolition and renovation operations. (Subpart M)

*b. Beryllium.* Any of the following stationary sources: beryllium extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium oxide, beryllium alloys, or beryllium-containing waste; and machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight. (Subpart C)

*c. Beryllium rocket motor firing.* Rocket motor test sites. (Subpart D)

*d. Mercury.* Any of the following involving mercury emissions: mercury ore processing facilities, mercury cell chlor-alkali plants, sludge incineration plants, sludge drying plants, and a combination of sludge incineration plants and sludge drying plants. (Subpart E)

*e. Vinyl chloride.* Ethylene dichloride purification and the oxychlorination reactor in ethylene dichloride plants. Vinyl chloride formation and purification in vinyl chloride plants. Any of the following involving polyvinyl chloride plants: reactor; stripper; mixing, weighing, and holding containers; monomer recovery system; sources following the stripper(s). Any of the following involving ethylene dichloride, vinyl chloride, and polyvinyl chloride plants: relief valve discharge; fugitive emission sources. (Subpart F)

*f. Equipment leaks of benzene (fugitive emission sources).* Any pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices or systems which handle benzene. (Subpart J)

*g. Equipment leaks of volatile hazardous air pollutants (fugitive emission sources).* Any pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices or systems which handle volatile hazardous air pollutants. (Subpart V)

*h. Inorganic arsenic emissions from arsenic trioxide and metallic arsenic production facilities.* Each metallic arsenic production plant and each arsenic trioxide plant that processes low-grade arsenic bearing materials by a roasting condensation process. (Subpart P)

*i. Inorganic arsenic emissions from glass manufacturing plants.* Each glass melting furnace (except pot furnaces) that uses commercial arsenic as a raw material. (Subpart N)

*j. Inorganic arsenic emissions from primary copper smelters.* Each copper converter at any new or existing primary copper smelter except as noted in 40 CFR §61.172(a). (Subpart O)

*k. Benzene emissions from coke by-product recovery plants.* Each of the following sources at furnace and foundry coke by-product recovery plants: tar decanters, tar storage tanks, tar-intercepting sumps, flushing-liquor circulation tanks, light-oil sumps, light-oil condensers, light-oil decanters, wash-oil decanters, wash-oil circulation tanks, naphthalene processing, final coolers, final-cooler cooling towers, and the following equipment that is intended to operate in benzene service: pumps, valves, exhausters, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges or other connectors, and control devices or systems required by 40 CFR §61.135.

The provisions of this subpart also apply to benzene storage tanks, BTX storage tanks, light-oil storage tanks, and excess ammonia-liquor storage tanks at furnace coke by-product recovery plants. (Subpart L)

*l. Benzene emissions from benzene storage vessels.* Unless exempted, each storage vessel that is storing benzene having a specific gravity within the range of specific gravities specified in ASTM D 836-84 for Industrial Grade Benzene, ASTM D 835-85 for Refined Benzene-485, ASTM D 2359-85a for Refined Benzene-535, and ASTM D 4734-87 for Refined Benzene-545. These specifications are incorporated by reference as specified in 40 CFR §61.18. (Subpart Y)

*m. Benzene emissions from benzene transfer operations.* Unless exempted, the total of all loading racks at which benzene is loaded into tank trucks, rail cars, or marine vessels at each benzene production facility and each bulk terminal. (Subpart BB)

*n. Benzene waste operations.* Unless exempted, the provisions of this subrule apply to owners and operators of chemical manufacturing plants, coke by-product recovery plants, petroleum refineries, and facilities at which waste management units are used to treat, store, or dispose of waste generated by any of these listed facilities. (Subpart FF)

**23.1(4) Emission standards for hazardous air pollutants for source categories.** The federal standards for emissions of hazardous air pollutants for source categories, 40 Code of Federal Regulations Part 63 as amended or corrected through July 22, 2008, are adopted by reference, except those provisions which cannot be delegated to the states. The corresponding 40 CFR Part 63 subpart designation is in parentheses. An earlier date for adoption by reference may be included with the subpart designation in parentheses. 40 CFR Part 63, Subpart B, incorporates the requirements of Clean Air Act Sections 112(g) and 112(j) and does not adopt standards for a specific affected facility. Test methods (Appendix A), sources defined for early reduction provisions (Appendix B), and determination of the fraction biodegraded ( $F_{bio}$ ) in the biological treatment unit (Appendix C) of Part 63 also apply to the affected activities or facilities. For the purposes of this subrule, “hazardous air pollutant” has the same meaning found in 567—22.100(455B). For the purposes of this subrule, a “major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless a lesser quantity is established, or in the case of radionuclides, where

different criteria are employed. For the purposes of this subrule, an “area source” means any stationary source of hazardous air pollutants that is not a “major source” as defined in this subrule. Paragraph 23.1(4)“a,” general provisions (Subpart A) of Part 63, shall apply to owners or operators who are subject to subsequent subparts of 40 CFR Part 63 (except when otherwise specified in a particular subpart or in a relevant standard) as adopted by reference below. The provisions of 40 CFR Part 60, Subparts A, B, Da, and HHHH for the Clean Air Mercury Rule (CAMR), are found at subrules 23.1(2) and 23.1(5) and in 567—Chapter 34.

*a. General provisions.* General provisions apply to owners or operators of affected activities or facilities except when otherwise specified in a particular subpart or in a relevant standard. (Subpart A)

*b. Requirements for control technology determinations for major sources in accordance with Clean Air Act Sections 112(g) and 112(j).* (40 CFR Part 63, Subpart B)

(1) Section 112(g) requirements. For the purposes of this subparagraph, the definitions shall be the same as the definitions found in 40 CFR 63.2 and 40 CFR 63.41 as amended through December 27, 1996. The owner or operator of a new or reconstructed major source of hazardous air pollutants must apply maximum achievable control technology (MACT) for new sources to the new or reconstructed major source. If the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d), Section 112(h), or Section 112(j) of the Clean Air Act and incorporated in another subpart of 40 CFR Part 63, excluded in 40 CFR 63.40(e) and (f), or the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before June 29, 1998, then the major source in question is not subject to the requirements of this subparagraph. The owner or operator of an affected source shall apply for a construction permit as required in 567—paragraph 22.1(1)“b.” The construction permit application shall contain an application for a case-by-case MACT determination for the major source.

(2) Section 112(j) requirements. The owner or operator of a new or existing major source of hazardous air pollutants which includes one or more stationary sources included in a source category or subcategory for which the U.S. Environmental Protection Agency has failed to promulgate an emission standard within 18 months of the deadline established under CAA 112(d) must submit a MACT application (Parts 1 and 2) in accordance with the provisions of 40 CFR 63.52, as amended through April 5, 2002, by the CAA Section 112(j) deadline. In addition, the owner or operator of a new emission unit may submit an application for a Notice of MACT Approval before construction, as defined in 40 CFR 63.41, in accordance with the provisions of 567—paragraph 22.1(3)“a.”

*c.* Reserved.

*d. Compliance extensions for early reductions of hazardous air pollutants.* Compliance extensions for early reductions of hazardous air pollutants are available to certain owners or operators of an existing source who wish to obtain a compliance extension from a standard issued under Section 112(d) of the Act. (Subpart D)

*e.* Reserved.

*f. Emission standards for organic hazardous air pollutants from the synthetic chemical manufacturing industry.* These standards apply to chemical manufacturing process units that are part of a major source. These standards include applicability provisions, definitions and other general provisions that are applicable to Subparts F, G, and H of 40 CFR 63. (Subpart F)

*g. Emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater.* These standards apply to all process vents, storage vessels, transfer racks, and wastewater streams within a source subject to Subpart F of 40 CFR 63. (Subpart G)

*h. Emission standards for organic hazardous air pollutants for equipment leaks.* These standards apply to emissions of designated organic hazardous air pollutants from specified processes that are located at a plant site that is a major source. Affected equipment includes: pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems and control devices or systems required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific



subpart in 40 CFR Part 63. In organic hazardous air pollutant or in organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAPs as determined according to the provisions of 40 CFR Part 63.161. The provisions of 40 CFR Part 63.161 also specify how to determine that a piece of equipment is not in organic HAP service. (Subpart H)

*i. Emission standards for organic hazardous air pollutants for certain processes subject to negotiated regulation for equipment leaks.* These standards apply to emissions of designated organic hazardous air pollutants from specified processes (defined in 40 CFR 63.190) that are located at a plant site that is a major source. Subject equipment includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems at certain source categories. These standards establish the applicability of Subpart H for sources that are not classified as synthetic organic chemical manufacturing industries. (Subpart I)

*j. Emission standards for hazardous air pollutants for polyvinyl chloride and copolymers production.* This standard applies to a polyvinyl chloride (PVC) or copolymer production facility that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. (Part 63, Subpart J)

*k. Reserved.*

*l. Emission standards for coke oven batteries.* These standards apply to existing coke oven batteries, including by-product and nonrecovery coke oven batteries and to new coke oven batteries, or as defined in the subpart. (Subpart L)

*m. Perchloroethylene air emission standards for dry cleaning facilities (40 CFR Part 63, Subpart M).* These standards apply to the owner or operator of each dry cleaning facility that uses perchloroethylene (also known as perc). The specific standards applicable to dry cleaning facilities, including the compliance deadlines, are set out in the federal regulations contained in Subpart M. In general, dry cleaning facilities must meet the following requirements, which are set out in greater detail in Subpart M:

(1) New and existing major source dry cleaning facilities are required to control emissions to the level of the maximum achievable control technology (MACT).

(2) New and existing area source dry cleaning facilities are required to control emissions to the level achieved by generally available control technologies (GACT) or management practices.

(3) New area sources that are located in residential buildings and that commence operation after July 13, 2006, are prohibited from using perc.

(4) New area sources located in residential buildings that commenced operation between December 21, 2005, and July 13, 2006, must eliminate all use of perc by July 27, 2009.

(5) Existing area sources located in residential buildings must eliminate all use of perc by December 21, 2020.

(6) New area sources that are not located in residential buildings are prohibited from operating transfer machines.

(7) Existing area sources that are not located in residential buildings are prohibited from operating transfer machines after July 27, 2008.

(8) All sources must comply with the requirements in Subpart M for emissions control, equipment specifications, leak detection and repair, work practice standards, record keeping and reporting.

*n. Emission standards for chromium emissions from hard and decorative chromium electroplating and chromium anodizing tanks.* These standards limit the discharge of chromium compound air emissions from existing and new hard chromium electroplating, decorative chromium electroplating, and chromium anodizing tanks at major and area sources. (Subpart N)

*o. Emission standards for hazardous air pollutants for ethylene oxide commercial sterilization and fumigation operations.* New and existing major source ethylene oxide commercial sterilization and fumigation operations are required to control emissions to the level of the maximum achievable control technology (MACT). New and existing area source ethylene oxide commercial sterilization and fumigation operations are required to control emissions to the level achieved by generally available control technologies (GACT). Certain sources are exempt as described in 40 CFR 63.360. (Subpart O)

*p. Emission standards for primary aluminum reduction plants.* These standards apply to each new or existing potline, paste production plant, or anode bake furnace associated with a primary aluminum reduction plant, and for each new pitch storage tank associated with a primary aluminum production plant, except existing furnaces not located on the same site as the primary aluminum reduction plant. (Subpart LL)

*q. Emission standards for hazardous air pollutants for industrial process cooling towers.* These standards apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources. (Subpart Q)

*r. Emission standards for hazardous air pollutants for sources categories: gasoline distribution: (Stage 1).* These standards apply to all existing and new bulk gasoline terminals and pipeline breakout stations that are major sources of hazardous air pollutants or are located at plant sites that are major sources. Bulk gasoline terminals and pipeline breakout stations located within a contiguous area or under common control with a refinery complying with 40 CFR Subpart CC are not subject to 40 CFR Subpart R standards. (Subpart R)

*s. Emission standards for hazardous air pollutants for pulp and paper (noncombustion).* These standards apply to pulping and bleaching process sources at kraft, soda, sulfite, and stand-alone semichemical pulp mills. Affected sources include pulp mills and integrated mills (mills that manufacture pulp and paper/paperboard) that chemically pulp wood fiber (using kraft, sulfite, soda, or semichemical methods); pulp secondary fiber; pulp nonwood fiber; and mechanically pulp wood fiber. (Subpart S)

*t. Emission standards for hazardous air pollutants: halogenated solvent cleaning.* These standards require batch vapor solvent cleaning machines and in-line solvent cleaning machines to meet emission standards reflecting the application of maximum achievable control technology (MACT) for major and area sources; area source batch cold cleaning machines are required to achieve generally available control technology (GACT). The subpart regulates the emissions of the following halogenated hazardous air pollutant solvents: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, and chloroform. (Subpart T)

*u. Emission standards for hazardous air pollutants: Group I polymers and resins.* Applicable to existing and new major sources that emit organic HAP during the manufacture of one or more elastomers including but not limited to producers of butyl rubber, halobutyl rubber, epichlorohydrin elastomers, ethylene propylene rubber, Hypalon™, neoprene, nitrile butadiene rubber, nitrile butadiene latex, polybutadiene rubber/styrene butadiene rubber by solution, polysulfide rubber, styrene butadiene rubber by emulsion, and styrene butadiene latex. MACT is required for major sources. (Subpart U)

*v. Reserved.*

*w. Emission standards for hazardous air pollutants for epoxy resins production and nonnylon polyamides production.* These standards apply to all existing, new and reconstructed manufacturers of basic liquid epoxy resins and manufacturers of wet strength resins that are located at a plant site that is a major source. (Subpart W)

*x. National emission standards for hazardous air pollutants from secondary lead smelting.* These standards apply to all existing and new secondary lead smelters sources which use blast, reverberatory, rotary, or electric smelting furnaces for lead recovery of scrap lead that are located at major or area sources. The provisions apply to smelting furnaces, refining kettles, agglomerating furnaces, dryers, process fugitive sources, and fugitive dust. Excluded from the rule are primary lead smelters, lead refiners, and lead remelters. Hazardous air pollutants regulated under this standard include but are not limited to lead compounds, arsenic compounds, and 1,3-butadiene. (Subpart X)

*y. Emission standards for marine tank vessel loading operations.* This standard requires existing and new major sources to control emissions using maximum achievable control technology (MACT) to control hazardous air pollutants (HAP). (Subpart Y)

*z. Reserved.*

*aa. Emission standards for hazardous air pollutants for phosphoric acid manufacturing.* These standards apply to all new and existing major sources of phosphoric acid manufacturing. Affected

processes include, but are not limited to, wet process phosphoric acid process lines, superphosphoric acid process lines, phosphate rock dryers, phosphate rock calciners, and purified phosphoric acid process lines. (Subpart AA)

*ab. Emission standards for hazardous air pollutants for phosphate fertilizers production.* These standards apply to all new and existing major sources of phosphate fertilizer production plants. Affected processes include, but are not limited to, diammonium and monoammonium phosphate process lines, granular triple superphosphate process lines, and granular triple superphosphate storage buildings. (Subpart BB)

*ac. National emission standards for hazardous air pollutants: petroleum refineries.* These standards apply to petroleum refining process units and colocated emission points at new and existing major sources. Affected sources include process vents, equipment leaks, storage vessels, transfer operations, and wastewater streams. The standards also apply to marine tank vessel and gasoline loading racks. Excluded from the standard are catalyst regeneration from catalytic cracking units and catalytic reforming units, and vents from sulfur recovery units. Compliance with the standard includes emission control and prevention. (Subpart CC)

*ad. Emission standards for hazardous air pollutants for off-site waste and recovery operations.* This rule applies to major sources of HAP emissions which receive certain wastes, used oil, and used solvents from off-site locations for storage, treatment, recovery, or disposal at the facility. Maximum achievable control technology (MACT) is required to reduce HAP emissions from tanks, surface impoundments, containers, oil-water separators, individual drain systems and other material conveyance systems, process vents, and equipment leaks. Regulated entities include but are not limited to businesses that operate any of the following: hazardous waste treatment, storage, and disposal facilities; Resource Conservation and Recovery Act (RCRA) exempt hazardous wastewater treatment facilities other than publicly owned treatment works; used solvent recovery plants; RCRA exempt hazardous waste recycling operations; used oil re-refineries. The regulations also apply to federal agency facilities that operate any of the waste management or recovery operations. (Subpart DD)

*ae. Emission standards for magnetic tape manufacturing operations.* These standards apply to major sources performing magnetic tape manufacturing operations. (Subpart EE)

*af. Reserved.*

*ag. National emission standards for hazardous air pollutants for source categories: aerospace manufacturing and rework facilities.* These standards apply to major sources involved in the manufacture, repair, or rework of aerospace components and assemblies, including but not limited to airplanes, helicopters, missiles, and rockets for civil, commercial, or military purposes. Hazardous air pollutants regulated under this standard include chromium, cadmium, methylene chloride, toluene, xylene, methyl ethyl ketone, ethylene glycol, and glycol ethers. (Subpart GG)

*ah. Emission standards for hazardous air pollutants for oil and natural gas production.* These standards apply to all new and existing major sources of oil and natural gas production. Affected sources include, but are not limited to, processing of liquid or gaseous hydrocarbons, such as ethane, propane, butane, pentane, natural gas, and condensate extracted from field natural gas. (Subpart HH)

*ai. Emission standards for hazardous air pollutants for shipbuilding and ship repair (surface coating) operations.* Requires existing and new major sources to control hazardous air pollutant (HAP) emissions using the maximum achievable control technology (MACT). (Subpart II)

*aj. Emission standards for hazardous air pollutants for hazardous air pollutant (HAP) emissions from wood furniture manufacturing operations.* These standards apply to each facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source. (Subpart JJ)

*ak. Emission standards for hazardous air pollutants for the printing and publishing industry.* Existing and new major sources are required to control hazardous air pollutants (HAP) using the maximum achievable control technology (MACT). Affected units are publication rotogravure, product and packaging rotogravure, and wide-web flexographic printing. (Subpart KK)

*al. Emission standards for hazardous air pollutants for primary aluminum reduction plants.* These standards apply to each new or existing potline, paste production plant, and anode bake furnace

associated with a primary aluminum reduction plant, and for each new pitch storage tank associated with a primary aluminum production plant. (Part 63, Subpart LL)

*am. Emission standards for hazardous air pollutants for chemical recovery combustion sources at kraft, soda, sulfite, and stand-alone semichemical pulp mills.* (Part 63, Subpart MM)

*an. Reserved.*

*ao. Emission standards for tanks – level 1.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Part 63, Subpart OO)

*ap. Emission standards for containers.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Part 63, Subpart PP)

*aq. Emission standards for surface impoundments.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Part 63, Subpart QQ)

*ar. Emission standards for individual drain systems.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Part 63, Subpart RR)

*as. Emission standards for closed vent systems, control devices, recovery devices and routing to a fuel gas system or a process.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions, (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Subpart SS)

*at. Emission standards for equipment leaks—control level 1.* These provisions apply to the control of air emissions from equipment leaks for which another paragraph under this rule references the use of this paragraph for such emission control. These air emission standards for equipment leaks are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions, (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Subpart TT)

*au. Emission standards for equipment leaks—control level 2 standards.* These provisions apply to the control of air emissions from equipment leaks for which another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards for equipment leaks are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions, (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Subpart UU)

*av. Emission standards for oil-water separators and organic-water separators.* These provisions apply when another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph

23.1(4)“a,” general provisions (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Part 63, Subpart VV)

*aw. Emission standards for storage vessels (tanks)—control level 2.* These provisions apply to the control of air emissions from storage vessels for which another paragraph under this rule references the use of this paragraph for such air emission control. These air emission standards for storage vessels are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing paragraph. The provisions of paragraph 23.1(4)“a,” general provisions, (Subpart A), do not apply to this paragraph except as specified in a referencing paragraph. (Subpart WW)

*ax. Emission standards for ethylene manufacturing process units: heat exchange systems and waste operations.* This standard applies to hazardous air pollutants (HAPs) from heat exchange systems and waste streams at new and existing ethylene production units. (Part 63, Subpart XX)

*ay. Emission standards for hazardous air pollutants: generic maximum achievable control technology (Generic MACT).* These standards apply to new and existing major sources of acetal resins (AR) production, acrylic and modacrylic fiber (AMF) production, hydrogen fluoride (HF) production, polycarbonate (PC) production, carbon black production, cyanide chemicals manufacturing, ethylene production, and Spandex production. Affected processes include, but are not limited to, producers of homopolymers and copolymers of alternating oxymethylene units, acrylic fiber, modacrylic fiber synthetics composed of acrylonitrile (AN) units, hydrogen fluoride and polycarbonate. (Subpart YY)

*az. to bb.* Reserved.

*bc. Emission standards for hazardous air pollutants for steel pickling—HCL process facilities and hydrochloric acid regeneration plants.* Unless exempted, these standards apply to all new and existing major sources of hydrochloric acid process steel pickling facilities and hydrochloric acid regeneration plants. Affected processes include, but are not limited to, equipment and tanks configured for the pickling process, including the immersion, drain and rinse tanks and hydrochloric acid regeneration plants. (Subpart CCC)

*bd. Emission standards for hazardous air pollutants for mineral wool production.* These standards apply to all new and existing major sources of mineral wool production. Affected processes include, but are not limited to, cupolas and curing ovens. (Subpart DDD)

*be. Emission standards for hazardous air pollutants from hazardous waste combustors.* These standards apply to all hazardous waste combustors: hazardous waste incinerators, hazardous waste burning cement kilns, hazardous waste burning lightweight aggregate kilns, hazardous waste solid fuel boilers, hazardous waste liquid fuel boilers, and hazardous waste hydrochloric acid production furnaces, except as specified in Subpart EEE. Both area sources and major sources are subject to this subpart as of April 19, 1996, and are subject to the requirement to apply for and obtain a Title V permit. (Part 63, Subpart EEE)

*bf.* Reserved.

*bg. Emission standards for hazardous air pollutants for pharmaceutical manufacturing.* These standards apply to producers of finished dosage forms of drugs, for example, tablets, capsules, and solutions, that contain an active ingredient generally, but not necessarily, in association with inactive ingredients. Pharmaceuticals include components whose intended primary use is to furnish pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment, or prevention of disease, or to affect the structure or any function of the body of humans or other animals. The regulations do not apply to research and development facilities. (Subpart GGG)

*bh. Emission standards for hazardous air pollutants for natural gas transmission and storage.* These standards apply to all new and existing major sources of natural gas transmission and storage. Natural gas transmission and storage facilities are those that transport or store natural gas prior to its entering the pipeline to a local distribution company. Affected sources include, but are not limited to, mains, valves, meters, boosters, regulators, storage vessels, dehydrators, compressors and delivery systems. (Subpart HHH)

*bi. Emission standards for hazardous air pollutants for flexible polyurethane foam production.* These standards apply to producers of slabstock, molded, and rebond flexible polyurethane

foam. The regulations do not apply to processes dedicated exclusively to the fabrication (i.e., gluing or otherwise bonding foam pieces together) of flexible polyurethane foam or to research and development. (Subpart III)

*bj. Emission standards for hazardous air pollutants: Group IV polymers and resins.* Applicable to existing and new major sources that emit organic HAP during the manufacture of the following polymers and resins: acrylonitrile butadiene styrene resin (ABS), styrene acrylonitrile resin (SAN), methyl methacrylate acrylonitrile butadiene styrene resin (MABS), methyl methacrylate butadiene styrene resin (MBS), polystyrene resin, poly (ethylene terephthalate) resin (PET), and nitrile resin. MACT is required for major sources. (Subpart JJJ)

*bk. Reserved.*

*bl. Emission standards for hazardous air pollutants for Portland cement manufacturing operations.* These standards apply to all new and existing major and area sources of Portland cement manufacturing unless exempted. Cement kiln dust (CKD) storage facilities, including CKD piles and landfills, are excluded from this standard. Affected processes include, but are not limited to, all cement kilns and in-line kiln/raw mills, unless they burn hazardous waste. (Subpart LLL)

*bm. Emission standards for hazardous air pollutants for pesticide active ingredient production.* These standards apply to all new and existing major sources of pesticide active ingredient production that manufacture organic pesticide active ingredients (PAI), including herbicides, insecticides and fungicides. Affected processes include, but are not limited to, processing equipment, connected piping and ducts, associated storage vessels, pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves and connectors. Exempted sources include research and development facilities, storage vessels already subject to another 40 CFR Part 63 NESHAP, production of ethylene, storm water from segregated sewers, water from fire-fighting and deluge systems (including testing of such systems) and various spills. (Subpart MMM)

*bn. Emission standards for hazardous air pollutants for wool fiberglass manufacturing.* These standards apply to all new and existing major sources of wool fiberglass manufacturing. Affected processes include, but are not limited to, all glass-melting furnaces, rotary spin (RS) manufacturing lines that produce bonded building insulation, flame attenuation (FA) manufacturing lines producing bonded pipe insulation and new FA manufacturing lines producing bonded heavy-density products. (Subpart NNN)

*bo. Emission standards for hazardous air pollutants for amino/phenolic resins production.* These standards apply to new or existing facilities that own or operate an amino or phenolic resins production unit. (Part 63, Subpart OOO)

*bp. Emission standards for hazardous air pollutants for polyether polyols production.* These standards apply to all new and existing major sources of polyether polyols. Polyether polyols are compounds formed through polymerization of ethylene oxide, propylene oxide or other cyclic ethers with compounds having one or more reactive hydrogens to form polyethers. Affected processes include, but are not limited to, storage vessels, process vents, heat exchange systems, equipment leaks and wastewater operations. (Subpart PPP)

*bq. Emission standards for hazardous air pollutants for primary copper smelting.* This standard applies to a new or existing primary copper smelter that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. (Part 63, Subpart QQQ)

*br. Emission standards for hazardous air pollutants for secondary aluminum production.* (Part 63, Subpart RRR)

*bs. Reserved.*

*bt. Emission standards for hazardous air pollutants for primary lead smelting.* These standards apply to all new and existing major sources of primary lead smelting. Affected processes include, but are not limited to, sintering machines, blast furnaces, dross furnaces and process fugitive sources. (Subpart TTT)

*bu. Emission standards for hazardous air pollutants for petroleum refineries: catalytic cracking units, catalytic reforming units, and sulfur recovery units.* This standard applies to a new or existing

petroleum refinery that is located at a major source of hazardous air pollutants (HAPs) emissions. (Part 63, Subpart UUU)

*bv. Emission standards for hazardous air pollutants publicly owned treatment works (POTW).* (Part 63, Subpart VVV)

*bw. Reserved.*

*bx. Emission standards for hazardous air pollutants for ferroalloys production: ferromanganese and silicomanganese.* These standards apply to all new and existing major sources of ferroalloys production of ferromanganese and silicomanganese. Affected processes include, but are not limited to, submerged arc furnaces, metal oxygen refining (MOR) processes, crushing and screening operations, and fugitive dust sources. (Subpart XXX)

*by. to bz. Reserved.*

*ca. Emission standards for hazardous air pollutants: municipal solid waste landfills.* This standard applies to existing and new municipal solid waste (MSW) landfills. (Part 63, Subpart AAAA)

*cb. Reserved.*

*cc. Emission standards for hazardous air pollutants for the manufacturing of nutritional yeast.* (Part 63, Subpart CCCC)

*cd. Emission standards for hazardous air pollutants for plywood and composite wood products (formerly plywood and particle board manufacturing).* These standards apply to new and existing major sources with equipment used to manufacture plywood and composite wood products. This equipment includes dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing process. This also includes coating operations, on-site storage and wastewater treatment. However, only certain process units (defined in the federal rule) are subject to control or work practice requirements. (Part 63, Subpart DDDD)

*ce. Emission standards for hazardous air pollutants for organic liquids distribution (non-gasoline).* These standards apply to new and existing major source organic liquids distribution (non-gasoline) operations, which are carried out at storage terminals, refineries, crude oil pipeline stations, and various manufacturing facilities. (Part 63, Subpart EEEE)

*cf. Emission standards for hazardous air pollutants for miscellaneous organic chemical manufacturing (MON).* These standards establish emission limits and work practice standards for new and existing major sources with miscellaneous organic chemical manufacturing process units, wastewater treatment and conveyance systems, transfer operations, and associated ancillary equipment. (Part 63, Subpart FFFF)

*cg. Emission standards for hazardous air pollutants for solvent extraction for vegetable oil production.* (Part 63, Subpart GGGG)

*ch. Emission standards for hazardous air pollutants for wet-formed fiberglass mat production.* This standard applies to wet-formed fiberglass mat production plants that are major sources of hazardous air pollutants. These plants may be stand-alone facilities or located with asphalt roofing and processing facilities. (Part 63, Subpart HHHH)

*ci. Emission standards for hazardous air pollutants for surface coating of automobiles and light-duty trucks.* These standards apply to new, reconstructed, or existing affected sources, as defined in the standard, that are located at a facility which applies topcoat to new automobile or new light-duty truck bodies or body parts for new automobiles or new light-duty trucks and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants. Additional applicability criteria and exemptions from these standards may apply. (Part 63, Subpart IIII)

*cj. Emission standards for hazardous air pollutants: paper and other web coating.* This standard applies to a facility that is engaged in the coating of paper, plastic film, metallic foil, and other web surfaces located at a major source of hazardous air pollutant (HAP) emissions. (Part 63, Subpart JJJJ)

*ck. Emission standards for hazardous air pollutants for surface coating of metal cans.* These standards apply to a metal can surface coating operation that uses at least 5,700 liters (1,500 gallons (gal)) of coatings per year and is a major source, is located at a major source, or is part of a major source of hazardous air pollutant emissions. Coating operations located at an area source are not subject to

this rule. Additional applicability criteria and exemptions from these standards may apply. (Part 63, Subpart KKKK)

*cl.* Reserved.

*cm. Emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products.* These standards apply to miscellaneous metal parts and products surface coating facilities that are a major source, are located at a major source, or are part of a major source of hazardous air pollutant emissions. A miscellaneous metal parts and products surface coating facility that is located at an area source is not subject to this standard. Certain sources are exempt as described in the standard. (Part 63, Subpart MMMM)

*cn. Emission standards for hazardous air pollutants: surface coating of large appliances.* This standard applies to a facility that applies coatings to large appliance parts or products, and is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAPs). The large appliances source category includes facilities that apply coatings to large appliance parts or products. Large appliances include “white goods” such as ovens, refrigerators, freezers, dishwashers, laundry equipment, trash compactors, water heaters, comfort furnaces, electric heat pumps and most HVAC equipment intended for any application. (Part 63, Subpart NNNN)

*co. Emission standards for hazardous air pollutants for printing, coating, and dyeing of fabrics and other textiles.* These standards apply to new and existing facilities with fabric or other textile coating, printing, slashing, dyeing, or finishing operations, or group of such operations, that are a major source of hazardous air pollutants or are part of a facility that is a major source of hazardous air pollutants. Coating, printing, slashing, dyeing, or finishing operations located at an area source are not subject to this standard. Several exclusions from this source category are listed in the standard. (Part 63, Subpart OOOO)

*cp. Emission standards for surface coating of plastic parts and products.* These standards apply to new and existing major sources with equipment used to coat plastic parts and products. The surface coating application process includes drying/curing operations, mixing or thinning operations, and cleaning operations. Coating materials include, but are not limited to, paints, stains, sealers, topcoats, basecoats, primers, inks, and adhesives. (Part 63, Subpart PPPP)

*cq. Emission standards for hazardous air pollutants for surface coating of wood building products.* These standards establish emission limitations, operating limits, and work practice requirements for wood building products surface coating facilities that use at least 1,100 gallons of coatings per year and are a major source, are located at a major source, or are part of a major source of hazardous air pollutant emissions. Wood building products surface coating facilities located at an area source are not subject to this standard. Several exclusions from this source category are listed in the standard. (Part 63, Subpart QQQQ)

*cr. Emission standards for hazardous air pollutants: surface coating of metal furniture.* This standard applies to a metal furniture surface coating facility that is a major source, is located at a major source, or is part of a major source of HAP emissions. A metal furniture surface coating facility is one that applies coatings to metal furniture or components of metal furniture. Metal furniture means furniture or components that are constructed either entirely or partially from metal. (Part 63, Subpart RRRR)

*cs. Emission standards for hazardous air pollutants: surface coating of metal coil.* This standard requires that all new and existing “major” air toxics sources in the metal coil coating industry meet specific emission limits. Metal coil coating is the process of applying a coating (usually protective or decorative) to one or both sides of a continuous strip of sheet metal. Industries using coated metal include: transportation, building products, appliances, can manufacturing, and packaging. Other products using coated metal coil include measuring tapes, ventilation systems for walls and roofs, lighting fixtures, office filing cabinets, cookware, and sign stock material. (Part 63, Subpart SSSS)

*ct. Emission standards for hazardous air pollutants for leather finishing operations.* This standard applies to a new or existing leather finishing operation that is a major source of hazardous air pollutants (HAPs) emissions or that is located at, or is part of, a major source of HAP emissions. In general, a leather finishing operation is a single process or group of processes used to adjust and improve the



physical and aesthetic characteristics of the leather surface through multistage application of a coating comprised of dyes, pigments, film-forming materials, and performance modifiers dissolved or suspended in liquid carriers. (Part 63, Subpart TTTT)

*cu. Emission standards for hazardous air pollutants for cellulose products manufacturing.* This standard applies to a new or existing cellulose products manufacturing operation that is located at a major source of HAP emissions. Cellulose products manufacturing includes both the miscellaneous viscose processes source category and the cellulose ethers production source category. (Part 63, Subpart UUUU)

*cv. Emission standards for hazardous air pollutants for boat manufacturing.* (Part 63, Subpart VVVV)

*cw. Emission standards for hazardous air pollutants: reinforced plastic composites production.* This standard applies to a new or an existing reinforced plastic composites production facility that is located at a major source of HAP emissions. (Part 63, Subpart WWWW)

*cx. Emission standards for hazardous air pollutants: rubber tire manufacturing.* This standard applies to a rubber tire manufacturing facility that is located at, or is a part of, a major source of hazardous air pollutant (HAP) emissions. Rubber tire manufacturing includes the production of rubber tires and/or the production of components integral to rubber tires, the production of tire cord, and the application of puncture sealant. (Part 63, Subpart XXXX)

*cy. Emission standards for hazardous air pollutants for stationary combustion turbines.* These standards apply to stationary combustion turbines which are located at a major source of hazardous air pollutant emissions. Several subcategories have been defined within the stationary combustion turbine source category. Each subcategory has distinct requirements as specified in the standards. These standards do not apply to stationary combustion turbines located at an area source of hazardous air pollutant emissions. (Part 63, Subpart YYYY)

*cz. Emission standards for stationary reciprocating internal combustion engines.* These standards apply to new and existing major sources with stationary reciprocating internal combustion engines (RICE). These standards also apply to new and reconstructed RICE located at area sources. For purposes of these standards, stationary RICE means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. (Part 63, Subpart ZZZZ)

*da. Emission standards for hazardous air pollutants for lime manufacturing plants.* These standards regulate hazardous air pollutant emissions from new and existing lime manufacturing plants that are major sources, are colocated with major sources, or are part of major sources. Additional applicability criteria and exemptions from these standards may apply. (Part 63, Subpart AAAAA)

*db. Emission standards for hazardous air pollutants: semiconductor manufacturing.* These standards apply to new and existing major sources with semiconductor manufacturing. (Part 63, Subpart BBBB)

*dc. Emission standards for hazardous air pollutants for coke ovens: pushing, quenching, and battery stacks.* This standard applies to a new or existing coke oven battery at a plant that is a major source of HAP emissions. (Part 63, Subpart CCCCC)

*dd. Emission standards for industrial, commercial and institutional boilers and process heaters.* These standards apply to new and existing major sources with industrial, commercial or institutional boilers and process heaters. (Part 63, Subpart DDDDD)\*

\*As of April 15, 2009, the adoption by reference of Part 63, Subpart DDDDD, is rescinded. On July 30, 2007, the United States Court of Appeals for the District of Columbia Circuit issued its mandate vacating 40 CFR Part 63, Subpart DDDDD, in its entirety, and requiring EPA to repromulgate final standards for industrial, commercial or institutional boilers and process heaters at new and existing major sources.

*de. Emission standards for hazardous air pollutants for iron and steel foundaries.* These standards apply to each new or existing iron and steel foundary that is a major source of hazardous air pollutant emissions. A new affected source is an iron and steel foundary for which construction or reconstruction

began after December 23, 2002. An existing affected source is an iron and steel foundry for which construction or reconstruction began on or before December 23, 2002. (Part 63, Subpart EEEEE)

*df. Emission standards for hazardous air pollutants for integrated iron and steel manufacturing.* These standards apply to affected sources at an integrated iron and steel manufacturing facility that is, or is part of, a major source of hazardous air pollutant emissions. The affected sources are each new or existing sinter plant, blast furnace, and basic oxygen process furnace (BOPF) shop at an integrated iron and steel manufacturing facility that is, or is part of, a major source of hazardous air pollutant emissions. (Part 63, Subpart FFFFF)

*dg. Emission standards for hazardous air pollutants: site remediation.* These standards apply to new and existing major sources with certain types of site remediation activity on the source's property or on a contiguous property. These standards control hazardous air pollutant (HAP) emissions at major sources where remediation technologies and practices are used at the site to clean up contaminated environmental media (e.g., soil, groundwater, or surface water) or certain stored or disposed materials that pose a reasonable potential threat to contaminate environmental media.

Some site remediations already regulated by rules established under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA) are not subject to these standards, as specified in Subpart GGGGG. There are also exemptions for short-term remediation and for certain leaking underground storage tanks, as specified in Subpart GGGGG. (Part 63, Subpart GGGGG)

*dh. Emission standards for hazardous air pollutants for miscellaneous coating manufacturing.* These standards establish emission limits and work practice requirements for new and existing miscellaneous coating manufacturing operations, including, but not limited to, process vessels, storage tanks, wastewater, transfer operations, equipment leaks, and heat exchange systems. (Part 63, Subpart HHHHH)

*di. Emission standards for mercury emissions from mercury cell chlor-alkali plants.* These standards apply to the chlorine production source category. This source category contains the mercury cell chlor-alkali plant subcategory and includes all plants engaged in the manufacture of chlorine and caustic in mercury cells. These standards define two affected sources: mercury cell chlor-alkali production facilities and mercury recovery facilities. (Part 63, Subpart IIIII)

*dj. Emission standards for hazardous air pollutants for brick and structural clay products manufacturing.* These standards apply to new and existing brick and structural clay products manufacturing facilities that are, are located at, or are part of a major source of hazardous air pollutant emissions. (Part 63, Subpart JJJJJ)\*

\*As of April 15, 2009, the adoption by reference of Part 63, Subpart JJJJJ, is rescinded. On June 18, 2007, the United States Court of Appeals for the District of Columbia Circuit issued its mandate vacating 40 CFR Part 63, Subpart JJJJJ, in its entirety, and requiring EPA to repromulgate final standards for brick and structural clay products manufacturing at new and existing major sources.

*dk. Emission standards for hazardous air pollutants for clay ceramics manufacturing.* These standards apply to clay ceramics manufacturing facilities that are, are located at, or are part of a major source of hazardous air pollutant emissions. The clay ceramics manufacturing source category includes those facilities that manufacture pressed floor tile, pressed wall tile, and other pressed tile; or sanitaryware, such as toilets and sinks. (Part 63, Subpart KKKKK)

*dl. Emission standards for hazardous air pollutants: asphalt processing and asphalt roofing manufacturing.* This standard applies to an existing or new asphalt processing or asphalt roofing manufacturing facility that is a major source of hazardous air pollutants (HAPs) emissions, or is located at, or is part of a major source of HAP emissions. (Part 63, Subpart LLLLL)

*dm. Emission standards for hazardous air pollutants: flexible polyurethane foam fabrication operations.* This standard applies to a new or existing source at a flexible polyurethane foam fabrication facility. The standard defines two affected sources (units or collections of units to which a given standard or limit applies) corresponding to the two subcategories, loop slitter adhesive use or flame lamination. (Part 63, Subpart MMMMM)

*dn. Emission standards for hazardous air pollutants: hydrochloric acid production.* This standard applies to a new or existing HCl production facility that produces a liquid HCl product at a concentration of 30 weight percent or greater during its normal operations and is located at, or is part of, a major source of HAP. This does not include HCl production facilities that only occasionally produce liquid HCl product at a concentration of 30 weight percent or greater. (Part 63, Subpart NNNNN)

*do.* Reserved.

*dp. Emission standards for hazardous air pollutants: engine test cells/stands.* This standard applies to an engine test cell/stand that is located at a major source of HAP emissions. An engine test cell/stand is any apparatus used for testing uninstalled stationary or uninstalled mobile engines. (Part 63, Subpart PTTTT)

*dq. Emission standards for hazardous air pollutants for friction materials manufacturing facilities.* This standard applies to a new or existing friction materials manufacturing facility that is (or is part of) a major source of hazardous air pollutants (HAPs) emissions. Friction materials manufacturing facilities produce friction materials for use in brake and clutch assemblies. (Part 63, Subpart QQQQ)

*dr. Emission standards for hazardous air pollutants: taconite iron ore processing.* These standards apply to new and existing taconite iron ore processing plants that are, or are part of, a major source of HAP emissions. (Part 63, Subpart RRRRR)

*ds. Emission standards for hazardous air pollutants for refractory products manufacturing.* This standard applies to a new or existing refractory products manufacturing facility that is, is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions. (Part 63, Subpart SSSSS)

*dt. Emission standards for hazardous air pollutants: primary magnesium refining.* These standards apply to primary magnesium refining plants that are, or are part of, a major source of HAP emissions. (Part 63, Subpart TTTTT)

*du.* and *dv.* Reserved.

*dw. Emission standards for hazardous air pollutants for hospital ethylene oxide sterilizer area sources.* This standard applies to a hospital that is an area source for hazardous air pollutant emissions and that owns or operates a new or existing ethylene oxide sterilization facility. (Part 63, Subpart WWWW)

*dx.* Reserved.

*dy. Emission standards for hazardous air pollutants for electric arc furnace steelmaking area sources.* This standard applies to new or existing electric arc furnace (EAF) steelmaking facilities that are area sources for hazardous air pollutant emissions. (Part 63, Subpart YYYYY)

*dz. Emission standards for hazardous air pollutants for iron and steel foundry area sources.* This standard applies to new or existing iron and steel foundries that are area sources for hazardous air pollutant emissions. (Part 63, Subpart ZZZZZ)

*ea.* Reserved.

*eb. Emission standards for hazardous air pollutants for gasoline distribution area sources: bulk terminals, bulk plants and pipeline facilities.* This standard applies to new and existing bulk gasoline terminals, pipeline breakout stations, pipeline pumping stations and bulk gasoline plants that are area sources for hazardous air pollutant emissions. (Part 63, Subpart BBBBB)

*ec. Emission standards for hazardous air pollutants for area sources: gasoline dispensing facilities.* This standard applies to new and existing gasoline dispensing facilities (GDF) that are area sources for hazardous air pollutant emissions. The affected equipment includes each gasoline cargo tank during delivery of product to GDF and also includes each storage tank. The equipment used for refueling of motor vehicles is not covered under these standards. (Part 63, Subpart CCCCC)

*ed.* to *eg.* Reserved.

*eh. Emission standards for hazardous air pollutants for area sources: paint stripping and miscellaneous surface coating operations.* This standard applies to new or existing area sources of hazardous air pollutant emissions that engage in any of the following activities: (1) paint stripping operations that use methylene chloride (MeCl)-containing paint stripping formulations; (2) spray application of coatings to motor vehicles or mobile equipment; or (3) spray application of coatings to

plastic or metal substrate with coatings that contain compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni) or cadmium (Cd). (Part 63, Subpart HHHHHH)

*ei.* to *ek.* Reserved.

*el.* *Emission standards for hazardous air pollutants for acrylic and modacrylic fibers production area sources.* This standard applies to acrylic and modacrylic fibers production plants that are area sources for hazardous air pollutant emissions. (Part 63, Subpart LLLLLL)

*em.* *Emission standards for hazardous air pollutants for carbon black production area sources.* This standard applies to carbon black production plants that are area sources for hazardous air pollutants. (Part 63, Subpart MMMMMM)

*en.* *Emission standards for hazardous air pollutants for chemical manufacturing of chromium compounds area sources.* This standard applies to plants that produce chromium compounds and are area sources for hazardous air pollutants. (Part 63, Subpart NNNNNN)

*eo.* *Emission standards for hazardous air pollutants for flexible polyurethane foam production and fabrication area sources.* This standard applies to plants that produce flexible polyurethane foam or rebond foam, and plants that fabricate polyurethane foam, that are area sources for hazardous air pollutants. This standard applies to both new and existing area sources. An affected source is existing if construction or reconstruction commenced on or before April 4, 2007. An affected source is new if construction or reconstruction commenced after April 4, 2007. (Part 63, Subpart OOOOOO)

*ep.* *Emission standards for hazardous air pollutants for lead acid battery manufacturing area sources.* This standard applies to lead acid battery manufacturing plants that are area sources for hazardous air pollutants. Affected sources include all grid casting facilities, paste mixing facilities, three-process operation facilities, lead oxide manufacturing facilities, lead reclamation facilities, and any other lead-emitting operation that is associated with a lead acid battery manufacturing plant. This standard applies to both new and existing area sources. An affected source is existing if construction or reconstruction commenced on or before April 4, 2007. An affected source is new if construction or reconstruction commenced after April 4, 2007. (Part 63, Subpart PPPPPP)

*eq.* *Emission standards for hazardous air pollutants for wood preserving area sources.* This standard applies to wood preserving operations that are area sources for hazardous air pollutants. This standard applies to both new and existing area sources. An affected source is existing if construction or reconstruction commenced on or before April 4, 2007. An affected source is new if construction or reconstruction commenced after April 4, 2007. (Part 63, Subpart QQQQQQ)

*er.* *Emission standards for hazardous air pollutants for clay ceramics manufacturing area sources.* This standard applies to any new or existing clay ceramics manufacturing facility with an atomized glaze spray booth or kiln that fires glazed ceramic ware, that processes more than 50 tons per year of wet clay, and that is an area source for hazardous air pollutant emissions. (Part 63, Subpart RRRRRR)

*es.* *Emission standards for hazardous air pollutants for glass manufacturing area sources.* This standard applies to any new or existing glass manufacturing facility that is an area source for hazardous air pollutant emissions and meets the following criteria: (1) manufactures flat glass, glass containers or pressed and blown glass by melting a mixture of raw materials to produce molten glass and form the molten glass into sheets, containers or other shapes; and (2) uses one or more continuous furnaces to produce glass at a rate of at least 50 tons per year and that contains compounds of one or more "glass manufacturing metal HAP," as defined in 40 CFR 63.11459, as raw materials in a glass manufacturing batch formulation. (Part 63, Subpart SSSSSS)

*et.* *Emissions standards for hazardous air pollutants for secondary nonferrous metals processing area sources.* This standard applies to any new or existing secondary nonferrous metals processing facility that is an area source for hazardous air pollutant emissions. This standard applies to all crushing and screening operations at a secondary zinc processing facility and to all furnace melting operations located at any secondary nonferrous metals processing facility. (Part 63, Subpart TTTTTT)

**23.1(5)** *Emission guidelines.* The emission guidelines and compliance times for existing sources, as defined in 40 Code of Federal Regulations Part 60 as amended through June 9, 2006, shall apply to the following affected facilities. The corresponding 40 CFR Part 60 subpart designation is in parentheses.

The control of the designated pollutants will be in accordance with federal standards established in Sections 111 and 129 of the Act and 40 CFR Part 60, Subpart B (Adoption and Submittal of State Plans for Designated Facilities), and the applicable subpart(s) for the existing source. Reference test methods (Appendix A), performance specifications (Appendix B), determination of emission rate change (Appendix C), quality assurance procedures (Appendix F) and the general provisions (Subpart A) of 40 CFR Part 60 also apply to the affected facilities.

*a. Emission guidelines for municipal solid waste landfills (Subpart Cc).* Emission guidelines and compliance times for the control of certain designated pollutants from designated municipal solid waste landfills shall be in accordance with federal standards established in Subparts Cc (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills) and WWW (Standards of Performance for Municipal Solid Waste Landfills) of 40 CFR Part 60.

(1) Definitions. For the purpose of 23.1(5)“a,” the definitions have the same meaning given to them in the Act and 40 CFR Part 60, Subparts A (General Provisions), B, and WWW, if not defined in this subparagraph.

“Municipal solid waste landfill” or “MSW landfill” means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes such as commercial solid waste, nonhazardous sludge, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill or a lateral expansion.

(2) Designated facilities.

1. The designated facility to which the emission guidelines apply is each existing MSW landfill for which construction, reconstruction or modification was commenced before May 30, 1991.

2. Physical or operational changes made to an existing MSW landfill solely to comply with an emission guideline are not considered a modification or reconstruction and would not subject an existing MSW landfill to the requirements of 40 CFR Part 60, Subpart WWW (40 CFR 60.750).

3. For MSW landfills subject to rule 567—22.101(455B) only because of applicability to subparagraph 23.1(5)“a”(2), the following apply for obtaining and maintaining a Title V operating permit under 567—22.104(455B):

The owner or operator of an MSW landfill with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not required to obtain an operating permit for the landfill.

The owner or operator of an MSW landfill with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters on or before June 22, 1998, becomes subject to the requirements of 567—subrule 22.105(1) on September 20, 1998. This requires the landfill to submit a Title V permit application to the Air Quality Bureau, Department of Natural Resources, no later than September 20, 1999.

The owner or operator of a closed MSW landfill does not have to maintain an operating permit for the landfill if either of the following conditions are met: the landfill was never subject to the requirement for a control system under subparagraph 23.1(5)“a”(3); or the owner or operator meets the conditions for control system removal specified in 40 CFR § 60.752(b)(2)(v).

(3) Emission guidelines for municipal solid waste landfill emissions.

1. MSW landfill emissions at each MSW landfill meeting the conditions below shall be controlled. A design capacity report must be submitted to the director by November 18, 1997.

The landfill has accepted waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition.

The landfill has a design capacity greater than or equal to 2.5 million megagrams or 2.5 million cubic meters. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. All calculations used to determine the maximum design capacity must be included in the design capacity report.

The landfill has a nonmethane organic compound (NMOC) emission rate of 50 megagrams per year or more. If the MSW landfill's design capacity exceeds the established thresholds in 23.1(5) "a"(3)"1," the NMOC emission rate calculations must be provided with the design capacity report.

2. The planning and installation of a collection and control system shall meet the conditions provided in 40 CFR 60.752(b)(2) at each MSW landfill meeting the conditions in 23.1(5) "a"(3)"1."

3. MSW landfill emissions collected through the use of control devices must meet the following requirements, except as provided in 40 CFR 60.24 after approval by the Director and U.S. Environmental Protection Agency.

An open flare designed and operated in accordance with the parameters established in 40 CFR 60.18; a control system designed and operated to reduce NMOC by 98 weight percent; or an enclosed combustor designed and operated to reduce the outlet NMOC concentration to 20 parts per million as hexane by volume, dry basis at 3 percent oxygen, or less.

(4) Test methods and procedures. The following must be used:

1. The calculation of the landfill NMOC emission rate listed in 40 CFR 60.754, as applicable, to determine whether the landfill meets the condition in 23.1(5) "a"(3)"3";

2. The operational standards in 40 CFR 60.753;

3. The compliance provisions in 40 CFR 60.755; and

4. The monitoring provisions in 40 CFR 60.756.

(5) Reporting and record-keeping requirements. The record-keeping and reporting provisions listed in 40 CFR 60.757 and 60.758, as applicable, except as provided under 40 CFR 60.24 after approval by the Director and U.S. Environmental Protection Agency, shall be used.

(6) Compliance times.

1. Except as provided for under 23.1(5) "a"(6)"2," planning, awarding of contracts, and installation of MSW landfill air emission collection and control equipment capable of meeting the emission guidelines established under 23.1(5) "a"(3) shall be accomplished within 30 months after the date the initial NMOC emission rate report shows NMOC emissions greater than or equal to 50 megagrams per year.

2. For each existing MSW landfill meeting the conditions in 23.1(5) "a"(3)"1" whose NMOC emission rate is less than 50 megagrams per year on August 20, 1997, installation of collection and control systems capable of meeting emission guidelines in 23.1(5) "a"(3) shall be accomplished within 30 months of the date when the condition in 23.1(5) "a"(3)"1" is met (i.e., the date of the first annual nonmethane organic compounds emission rate which equals or exceeds 50 megagrams per year).

*b. Emission guidelines for hospital/medical/infectious waste incinerators (Subpart Ce).* This paragraph contains emission guidelines and compliance times for the control of certain designated pollutants from hospital/medical/infectious waste incinerator(s) (HMIWI) in accordance with Subparts Ce and Ec (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators) of 40 CFR Part 60.

(1) Definitions. For the purpose of paragraph 23.1(5) "b," the definitions have the same meaning given to them in the Act and 40 CFR Part 60, Subparts A, B, and Ec, if not defined in this subparagraph.

"Hospital/medical/infectious waste incinerator" or "HMIWI" means any device that combusts any amount or combination of hospital or medical/infectious waste.

"Hospital waste" means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.

"Large HMIWI" means:

1. An HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour; or

2. A continuous or intermittent HMIWI whose maximum charge rate is more than 500 pounds per hour; or

3. A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day.

"Medical/infectious waste" means any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of

biologicals that is listed in numbered paragraphs “1” through “7” of this definition. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in 40 CFR Part 261; household waste, as defined in 40 CFR § 261.4(b)(1); ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in 40 CFR § 261.4(a)(1).

1. Cultures and stocks of infectious agents and associated biologicals, including: cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

2. Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy or other medical procedures, and specimens of body fluids and their containers.

3. Human blood and blood products including: liquid waste human blood, products of blood, items saturated or dripping with human blood; or items that were saturated or dripping with human blood that are now caked with dried human blood, including serum, plasma, and other blood components, and their containers, which were used or intended for use in patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also included in this category.

4. Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.

5. Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals or testing of pharmaceuticals.

6. Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly communicable diseases, or from isolated animals known to be infected with highly communicable diseases.

7. Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

*“Medium HMIWI”* means:

1. An HMIWI whose maximum design waste burning capacity is more than 200 pounds per hour but less than or equal to 500 pounds per hour; or

2. A continuous or intermittent HMIWI whose maximum charge rate is more than 200 pounds per hour but less than or equal to 500 pounds per hour; or

3. A batch HMIWI whose maximum charge rate is more than 1,600 pounds per day but less than or equal to 4,000 pounds per day.

*“Remote HMIWI”* means a small HMIWI meeting the following conditions:

1. Located 50 miles from the boundary of the nearest standard metropolitan statistical area (SMSA). The SMSA boundary is established by the political borders of the counties, provided in the definition of an SMSA, which are listed in parentheses.

2. Burns less than 2,000 lb/week of hospital waste and medical/infectious waste.

*“Small HMIWI”* means:

1. An HMIWI whose maximum design waste burning capacity is less than or equal to 200 pounds per hour; or

2. A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour; or

3. A batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day.

*“Standard metropolitan statistical area”* or *“SMSA”* means any areas listed in OMB Bulletin No. 93-17 entitled “Revised Statistical Definitions for Metropolitan Areas” dated June 30, 1993.

The following SMSAs are in Iowa or within 50 miles of Iowa border: Cedar Rapids (Linn County, IA), Davenport-Moline-Rock Island (Henry County, IL; Rock Island County, IL; Scott County, IA), Des Moines (Dallas County, Polk County, Warren County), Dubuque (Dubuque County), Iowa City (Johnson County), La Crosse (Houston County, MN; La Crosse County, WI), Omaha-Council Bluffs (Cass County, NE; Douglas County, NE; Pottawattamie County, IA; Sarpy County, NE; Washington County, NE), Rochester (Olmsted County, MN), St. Joseph (Andrew County, MO; Buchanan County, MO), Sioux City (Dakota County, NE; Woodbury County, IA), Sioux Falls (Lincoln County, SD; Minnehaha County, SD), and Waterloo-Cedar Falls (Black Hawk County).

(2) Designated facilities.

1. Except as provided in numbered paragraphs “2” through “8” of this subparagraph, the designated facility to which the guidelines apply is each individual HMIWI for which construction was commenced on or before June 20, 1996.

2. A combustor is not subject to this paragraph during periods when only pathological waste, low-level radioactive waste, or chemotherapeutic waste, or any combination thereof (defined in 40 CFR § 60.51c) is burned, provided the owner or operator of the combustor does the following: notifies the director of an exemption claim and keeps records on a calendar-quarter basis of the periods of time when only pathological waste, low-level radioactive waste, or chemotherapeutic waste, or any combination thereof, is burned.

3. Any co-fired combustor (defined in 40 CFR § 60.51c) is not subject to this paragraph if the owner or operator of the co-fired combustor notifies the director of an exemption claim; provides an estimate of the relative weight of hospital waste, medical/infectious waste, other fuels, and other wastes to be combusted; and keeps records on a calendar-quarter basis of the weight of hospital waste and medical/infectious waste combusted and the weight of all other fuels and wastes combusted at the co-fired combustor.

4. Any combustor required to have a permit under Section 3005 of the Solid Waste Disposal Act is not subject to paragraph 23.1(5) “b.”

5. Any combustor which meets the applicability requirements under Subpart Cb, Ea, or Eb of 40 CFR Part 60 is not subject to paragraph 23.1(5) “b.”

6. Any pyrolysis unit (defined in 40 CFR § 60.51c) is not subject to paragraph 23.1(5) “b.”

7. Cement kilns firing hospital, medical or infectious waste, or any combination thereof, are not subject to paragraph 23.1(5) “b.”

8. Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with paragraph 23.1(5) “b” are not considered a modification and do not result in an existing HMIWI becoming subject to the provisions of 40 CFR Part 60, Subpart Ec.

9. The Title V operating permit requirements, as stated in rule 567—22.101(455B), are applicable to designated facilities subject to paragraph 23.1(5) “b.” They must apply for an operating permit as specified by 567—subrule 22.105(1) no later than September 15, 2000.

(3) Emission limits.

1. An HMIWI must not exceed the emission limits for each pollutant listed in Table 1, except as provided for in numbered paragraph “2” of subparagraph 23.1(5) “b”(3).

2. A remote HMIWI must not exceed the emission limits for each pollutant listed in Table 2. The 2,000 lb/week limitation does not apply during performance tests.

3. On or after the date on which the initial performance test is completed or is required to be completed under 40 CFR Section 60.8, whichever comes first, no owner or operator of an affected facility shall cause any gases to be discharged into the atmosphere from the stack of the affected facility that exhibit greater than 10 percent opacity (6-minute block average).



Table 1. Emission Limits for Small, Medium, and Large HMIWI

Pollutant/Units (7 percent oxygen, dry basis)	Emission Limits for HMIWI Size		
	Small	Medium	Large
Particulate matter Milligrams per dry standard cubic meter (grains per dry standard cubic foot)	115 (0.05)	69 (0.03)	34 (0.015)
Carbon monoxide Parts per million by volume	40	40	40
Dioxins/furans Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet), or	125 (55)	125 (55)	125 (55)
Nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet)	2.3 (1.0)	2.3 (1.0)	2.3 (1.0)
Hydrogen chloride Parts per million by volume, or	100	100	100
Percent reduction	93	93	93
Sulfur dioxide Parts per million by volume	55	55	55
Nitrogen oxides Parts per million by volume	250	250	250
Lead Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet), or	1.2 (0.52)	1.2 (0.52)	1.2 (0.52)
Percent reduction	70	70	70
Cadmium Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet), or	0.16 (0.07)	0.16 (0.07)	0.16 (0.07)
Percent reduction	65	65	65
Mercury Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet), or	0.55 (0.24)	0.55 (0.24)	0.55 (0.24)
Percent reduction	85	85	85

Table 2. Emission Limits for Remote HMIWI

Pollutant	Units (7 percent oxygen, dry basis)	Emission Limit
Particulate matter	Milligrams per dry standard cubic meter (grains per dry standard cubic foot)	197 (0.086)
Carbon monoxide	Parts per million by volume	40
Dioxins/furans	Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic feet), or	800 (350)
	Nanograms per dry standard cubic meter TEQ (grains per billion dry standard cubic feet)	15 (6.6)
Hydrogen chloride	Parts per million by volume	3100
Sulfur dioxide	Parts per million by volume	55
Nitrogen oxides	Parts per million by volume	250
Lead	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	10 (4.4)
Cadmium	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	4 (1.7)
Mercury	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	7.5 (3.3)

(4) Operator training and qualification requirements. Designated facilities shall meet the requirements for operator training and qualification listed in 40 CFR § 60.53c by August 16, 2000 (which is one year from EPA's approval of the state's 111(d) plan for HMIWI).

(5) Waste management requirements. Designated facilities shall meet the requirements for a waste management plan listed in 40 CFR § 60.55c by June 16, 2002 (which is 34 months from EPA's approval of the state's 111(d) plan for HMIWI).

(6) Inspection requirements. Each remote HMIWI subject to the emission limits under numbered paragraph "2" of subparagraph 23.1(5) "b"(3) must conduct an initial equipment inspection by August 16, 2000 (which is one year from EPA's approval of the state's 111(d) plan for HMIWI), and perform equipment inspections annually, no more than 12 months after the previous inspection. The facility must complete all necessary repairs within ten operating days following an inspection. If the repairs cannot be accomplished within this period, then the owner or operator must obtain written approval from the department requesting an extension. All inspections shall include the following:

1. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation, and clean pilot flame sensor as necessary;
2. Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;
3. Inspect hinges and door latches, and lubricate as necessary;
4. Inspect dampers, fans, and blowers for proper operation;
5. Inspect HMIWI door and door gaskets for proper sealing;
6. Inspect motors for proper operation;
7. Inspect primary chamber refractory lining, and clean and repair or replace lining as necessary;
8. Inspect incinerator shell for corrosion and hot spots;
9. Inspect secondary/tertiary chamber and stack, and clean as necessary;
10. Inspect mechanical loader, including limit switches, for proper operation if applicable;
11. Visually inspect waste bed (grates), and repair or seal as appropriate;
12. For the burn cycle that follows the inspection, document that the incinerator is operating properly, and make any necessary adjustments;
13. Inspect air pollution control device(s) for proper operation if applicable;

14. Inspect waste heat boiler systems to ensure proper operation if applicable;
15. Inspect bypass stack components;
16. Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and
17. Generally observe whether the equipment is maintained in good operating condition.

(7) Compliance, performance testing, and monitoring requirements. Except as provided in subparagraphs 23.1(5) "b"(8) and (9), designated facilities shall meet the requirements for compliance and performance testing listed in 40 CFR § 60.56c (excluding the fugitive emissions testing requirements under 40 CFR § 60.56c(b)(12) and (c)(3)) and the requirements for monitoring listed in 40 CFR § 60.57c.

(8) Compliance and performance testing for remote HMIWI. Remote HMIWI shall meet the following compliance and performance testing requirements:

1. Conduct the performance testing requirements in 40 CFR § 60.56c(a), (b)(1) through (b)(9), (b)(11) (Hg only), and (c)(1). The 2,000 lb/week limitation under numbered paragraph "2" of subparagraph 23.1(5) "b"(3) does not apply during performance tests.

2. Establish maximum charge rate and minimum secondary chamber temperature as site-specific operating parameters during the initial performance test to determine compliance with applicable emission limits.

3. Following the date on which the initial performance test is completed or is required to be completed under 40 CFR § 60.8, whichever date comes first, remote HMIWI must not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as three-hour rolling averages (calculated each hour as the average of the previous three operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the maximum charge rate or below the minimum secondary chamber temperature shall constitute a violation of the established operating parameter(s).

4. Except as provided in numbered paragraph "5" of subparagraph 23.1(5) "b"(8), operation of the remote HMIWI above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a three-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits.

5. The owner or operator of the remote HMIWI may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the designated facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph must be conducted using the identical operating parameters that indicated a violation under numbered paragraph "4" of subparagraph 23.1(5) "b"(8).

(9) Monitoring requirements for remote HMIWI. Remote HMIWI must meet the following monitoring requirements:

1. Install, calibrate (to manufacturers' specifications), maintain, and operate a device for measuring and recording the temperature of the secondary chamber on a continuous basis, the output of which shall be recorded, at a minimum, once every minute throughout operation.

2. Install, calibrate (to manufacturers' specifications), maintain, and operate a device which automatically measures and records the date, time, and weight of each charge fed into the HMIWI.

3. The owner or operator of a designated facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that the designated facility is combusting hospital, medical or infectious waste, or a combination thereof.

(10) Reporting and record-keeping requirements. Designated facilities shall meet the reporting and record-keeping requirements listed in 40 CFR § 60.58c(b), (c), (d), (e), and (f), excluding 40 CFR § 60.58c(b)(2)(ii) (fugitive emissions) and (b)(7) (siting), except for remote HMIWI.

(11) Reporting and record-keeping requirements for remote HMIWI. Remote HMIWI must meet the following reporting and record-keeping requirements:

1. Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within ten days of an inspection; and

2. Submit an annual report containing information recorded under numbered paragraph “1” of subparagraph 23.1(5)“b”(11) no later than 60 days following the year in which data were collected. Subsequent reports shall be sent no later than 12 calendar months following the previous report (once the unit is subject to permitting requirements under Title V of the Act, the owner or operator must submit these reports semiannually). The report shall be signed by the facility’s manager.

(12) Compliance times for designated facilities planning to retrofit. Designated facilities planning to retrofit existing HMIWI shall comply with the emission limits specified in subparagraph 23.1(5)“b”(3) by August 16, 2002 (which is three years from EPA’s approval of the state’s 111(d) plan for HMIWI). To ensure compliance, these facilities must also comply with the following increments of progress:

1. Submit construction permit application to the department, as required by rule 567—22.1(455B), to outline the addition of control equipment and the modification of existing processes by August 16, 2000 (which is one year from EPA’s approval of the state’s 111(d) plan for HMIWI);

2. Award contracts for control systems or process modifications, or orders for purchase of components by February 16, 2001 (which is 18 months from EPA’s approval of the state’s 111(d) plan for HMIWI);

3. Initiate on-site construction or installation of the air pollution control device(s) or process changes by August 16, 2001 (which is two years from EPA’s approval of the state’s 111(d) plan for HMIWI);

4. Complete on-site construction or installation of air pollution control device(s) or process changes by May 16, 2002 (which is 33 months from EPA’s approval of the state’s 111(d) plan for HMIWI); and

5. Complete initial compliance test(s) on the air pollution control equipment by June 16, 2002 (which is 34 months from EPA’s approval of the state’s 111(d) plan for HMIWI).

(13) Compliance times for designated facilities planning to shut down. Designated facilities planning to shut down an existing HMIWI shall shut down by August 16, 2000 (which is one year from EPA’s approval of the state’s 111(d) plan for HMIWI). Designated facilities may request an extension from the department to operate the HMIWI for up to two additional years. The request for extension must be submitted to the department by May 16, 2000 (which is nine months from EPA’s approval of the state’s 111(d) plan for HMIWI) and include the following:

1. Documentation to support the need for the requested extension;

2. An evaluation of the option to transport the waste off site to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and

3. A plan that documents measurable and enforceable incremental steps of progress to be taken toward compliance with paragraph 23.1(5)“b,” including final compliance date which can be no later than September 16, 2002.

*c. Emission guidelines and compliance schedules for commercial and industrial solid waste incineration units that commenced construction on or before November 30, 1999.* Emission guidelines and compliance schedules for the control of designated pollutants from affected commercial and industrial solid waste incinerators that commenced construction on or before November 30, 1999, shall be in accordance with federal plan requirements established in Subpart III of 40 CFR Part 62.

*d. Emission guidelines for mercury for coal-fired electric utility steam generating units.* The provisions of 40 CFR Part 60, Subpart HHHH, are set forth in 567—Chapter 34.

**23.1(6) Calculation of emission limitations based upon stack height.** This rule sets limits for the maximum stack height credit to be used in ambient air quality modeling for the purpose of setting an emission limitation and calculating the air quality impact of a source. The rule does not limit the actual physical stack height for any source.

For the purpose of this subrule, definitions of “stack,” “a stack in existence,” “dispersion technique,” “nearby” and “excessive concentration” as set forth in 40 CFR §§ 51.100(ff) through (hh), (jj) and (kk) as amended through June 14, 1996, are adopted by reference.

- a.* “Good engineering practice (GEP) stack height” means the greater of:

- (1) Sixty-five meters, measured from the ground level elevation at the base of the stack; or
- (2) For stacks in existence on January 12, 1979, and for which the owner and operator had obtained all applicable permits or approvals required under 567—Chapter 22 and 40 CFR § 52.21 as amended through June 13, 2007,

$$H_g = 2.5H$$

provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

For all other stacks,

$$H_g = H + 1.5L$$

where:

$H_g$  = good engineering practice stack height, measured from the ground level elevation at the base of the stack,

$H$  = height of nearby structure(s) measured from the ground level elevation at the base of the stack,

$L$  = lesser dimension, height or projected width, of nearby structure(s), provided that the department may require the use of a field study or fluid model to verify GEP stack height for the source; or

(3) The height demonstrated by a fluid model or a field study approved by the department, which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features. Public notification of the availability of such study and opportunity for public hearing are required prior to approval by the department.

*b.* The degree of emission limitation required for control of any air contaminant under this chapter shall not be affected in any manner by:

- (1) The consideration of that portion of a stack which exceeds GEP stack height; or
- (2) Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or
- (3) Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combined exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase gas plume rise.

This rule is intended to implement Iowa Code section 455B.133.

[ARC 7565B, IAB 2/11/09, effective 3/18/09; ARC 7623B, IAB 3/11/09, effective 4/15/09]

### **567—23.2(455B) Open burning.**

**23.2(1) Prohibition.** No person shall allow, cause or permit open burning of combustible materials, except as provided in 23.2(2) and 23.2(3).

**23.2(2) Variances from rules.** Any person wishing to conduct open burning of materials not exempted in 23.2(3) may make application for a variance as specified in 567—subrule 21.2(1). In addition to requiring the information specified under 567—subrule 21.2(1), the director may require any person applying for a variance from the open burning rules to submit adequate documentation to allow the director to assess whether granting the variance will hinder attainment or maintenance of a National Ambient Air Quality Standard (NAAQS).

**23.2(3) Exemptions.** The open burning exemptions specified in this subrule shall not be construed as exemptions from any other applicable environmental regulations. In particular, the exemptions contained in this subrule do not absolve any person from compliance with the rules for solid waste disposal, including ash disposal, and solid waste permitting contained in 567—Chapters 100 through 130 or the rules for storm water runoff and storm water permitting contained in 567—Chapters 60 and 64. The following shall be permitted unless prohibited by local ordinances or regulations.

*a. Disaster rubbish.* The open burning of rubbish, including landscape waste, for the duration of the community disaster period in cases where an officially declared emergency condition exists. Burning of any structures or demolished structures shall be conducted in accordance with 40 CFR Section 61.145 as amended through January 16, 1991, which is the “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants.

*b. Trees and tree trimmings.* The open burning of trees and tree trimmings not originated on the premises provided that the burning site is operated by a local governmental entity, the burning site is fenced and access is controlled, burning is conducted on a regularly scheduled basis and is supervised at all times, burning is conducted only when weather conditions are favorable with respect to surrounding property, and the burning site is limited to areas at least one-quarter mile from any inhabited building unless a written waiver in the form of an affidavit is submitted by the owner of the building to the department and to the local governmental entity prior to the first instance of open burning at the site which occurs after November 13, 1996. The written waiver shall become effective only upon recording in the office of the recorder of deeds of the county in which the inhabited building is located. However, when the open burning of trees and tree trimmings causes air pollution as defined in Iowa Code section 455B.131(3), the department may take appropriate action to secure relocation of the burning operation. Rubber tires shall not be used to ignite trees and tree trimmings.

This exemption shall not apply within the area classified as the PM10 (inhalable) particulate Group II area of Mason City. This Group II area is described as follows: the area in Cerro Gordo County, Iowa, in Lincoln Township including Sections 13, 24 and 25; in Lime Creek Township including Sections 18, 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34 and 35; in Mason Township the W ½ of Section 1, Sections 2, 3, 4, 5, 8, 9, the N ½ of Section 11, the NW ¼ of Section 12, the N ½ of Section 16, the N ½ of Section 17 and the portions of Sections 10 and 15 north and west of the line from U.S. Highway 18 south on Kentucky Avenue to 9th Street SE; thence west on 9th Street SE to the Minneapolis and St. Louis railroad tracks; thence south on Minneapolis and St. Louis railroad tracks to 19th Street SE; thence west on 19th Street SE to the section line between Sections 15 and 16.

*c. Flare stacks.* The open burning or flaring of waste gases, providing such open burning or flaring is conducted in compliance with 23.3(2)“d” and 23.3(3)“e.”

*d. Landscape waste.* The disposal by open burning of landscape waste originating on the premises. However, the burning of landscape waste produced in clearing, grubbing and construction operations shall be limited to areas located at least one-fourth mile from any building inhabited by other than the landowner or tenant conducting the open burning. Rubber tires shall not be used to ignite landscape waste.

*e. Recreational fires.* Open fires for cooking, heating, recreation and ceremonies, provided they comply with 23.3(2)“d.” Burning rubber tires is prohibited from this activity.

*f. Residential waste.* Backyard burning of residential waste at dwellings of four-family units or less. The adoption of more restrictive ordinances or regulations of a governing body of the political subdivision, relating to control of backyard burning, shall not be precluded by these rules.

*g. Training fires.* For purposes of subrule 23.2(3), a “training fire” is a fire set for the purposes of conducting bona fide training of public or industrial employees in firefighting methods. For purposes of this paragraph, “bona fide training” means training that is conducted according to the National Fire Protection Association 1403 Standard of Live Fire Training Evolutions (2002 Edition) or a comparable training fire standard. A training fire may be conducted, provided that all of the following conditions are met:

- (1) A training fire on a building is conducted with the building structurally intact.
- (2) The training fire does not include the controlled burn of a demolished building.
- (3) If the training fire is to be conducted on a building, written notification is provided to the department on DNR Form 542-8010, Notification of an Iowa Training Fire-Demolition or a Controlled Burn of a Demolished Building, and is postmarked or delivered to the director at least ten working days before such action commences.

- (4) Notification shall be made in accordance with 40 CFR Section 61.145, “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as amended through January 16, 1991.

- (5) All asbestos-containing materials shall be removed prior to the training fire.

- (6) Asphalt roofing may be burned in the training fire only if notification to the director contains testing results indicating that none of the layers of asphalt roofing contain asbestos. During each calendar year, each fire department may conduct no more than two training fires on buildings where asphalt roofing

has not been removed, provided that for each of those training fires the asphalt roofing material present has been tested to ensure that it does not contain asbestos. Each fire department's limit on the burning of asphalt roofing shall include both training fires and the controlled burning of a demolished building, as specified in 23.2(3)"j."

(7) Rubber tires shall not be burned during a training fire.

*h. Paper or plastic pesticide containers and seed corn bags.* The disposal by open burning of paper or plastic pesticide containers (except those formerly containing organic forms of beryllium, selenium, mercury, lead, cadmium or arsenic) and seed corn bags resulting from farming activities occurring on the premises. Such open burning shall be limited to areas located at least one-fourth mile from any building inhabited by other than the landowner or tenant conducting the open burning, livestock area, wildlife area, or water source. The amount of paper or plastic pesticide containers and seed corn bags that can be disposed of by open burning shall not exceed one day's accumulation or 50 pounds, whichever is less. However, when the burning of paper or plastic pesticide containers or seed corn bags causes a nuisance, the director may take action to secure relocation of the burning operation. Since the concentration levels of pesticide combustion products near the fire may be hazardous, the person conducting the open burning should take precautions to avoid inhalation of the pesticide combustion products.

*i. Agricultural structures.* The open burning of agricultural structures, provided that the open burning occurs on the premises and, for agricultural structures located within a city or town, at least one-fourth mile from any building inhabited by a person other than the landowner, a tenant, or an employee of the landowner or tenant conducting the open burning unless a written waiver in the form of an affidavit is submitted by the owner of the building to the department prior to the open burning; all chemicals and asphalt roofing are removed; burning is conducted only when weather conditions are favorable with respect to surrounding property; and permission from the local fire chief is secured in advance of the burning. Rubber tires shall not be used to ignite agricultural structures. The asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as amended through January 16, 1991, requires the burning of agricultural structures to be conducted in accordance with 40 CFR Section 61.145, "Standard for Demolition and Renovation."

For the purposes of this subrule, "agricultural structures" means barns, machine sheds, storage cribs, animal confinement buildings, and homes located on the premises and used in conjunction with crop production, livestock or poultry raising and feeding operations. "Agricultural structures," for asbestos NESHAP purposes, includes all of the above, with the exception of a single residential structure on the premises having four or fewer dwelling units, which has been used only for residential purposes.

*j. Controlled burning of a demolished building.* A city, as "city" is defined in Iowa Code section 362.2(4), with approval of its council, as "council" is defined in Iowa Code section 362.2(8), may conduct a controlled burn of a demolished building. A city is the only party that may conduct such a burn and is responsible for ensuring that all of the following conditions are met:

(1) *Prohibition.* The controlled burning of a demolished building is prohibited within the city limits of Cedar Rapids, Marion, Hiawatha, Council Bluffs, Carter Lake, Des Moines, West Des Moines, Clive, Windsor Heights, Urbandale, Pleasant Hill, Buffalo, Davenport, Mason City or any other area where area-specific state implementation plans require the control of particulate matter.

(2) *Notification requirements.* For each building proposed to be burned, the city fire department or a city official, on behalf of the city, shall submit to the department a completed notification postmarked at least 10 working days prior to commencing demolition and at least 30 days before the proposed controlled burn commences. Documentation of city council approval shall be submitted with the notification. Information required to be provided shall include: the exact location of the burn site; the approximate distance to the nearest neighboring residence or business; the method used by the city to notify nearby residents of the proposed burn; an explanation of why alternative methods of demolition debris management are not being used; and information required by 40 CFR Section 61.145, "Standard for Demolition and Renovation" of the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as amended through January 16, 1991. Notification shall be provided on DNR Form 542-8010, Notification of an Iowa Training Fire-Demolition or a Controlled Burn of a Demolished Building. For burns conducted outside the city limits, the city shall send to the

chairperson of the applicable county board a copy of the completed DNR notification form 542-8010 and documentation of city council approval. Notification to the county board shall be postmarked, faxed or sent by electronic mail at least 30 days before the proposed controlled burn commences.

(3) *Asbestos removal requirements.* All asbestos-containing materials shall be removed before the building to be burned is demolished. The department may require proof that any applicable inspection, notification, removal and demolition occurred, or will occur, in accordance with 40 CFR Section 61.145, “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as amended through January 16, 1991.

(4) *Requirements for asphalt roofing.* During each calendar year, each city shall conduct no more than two controlled burns of a demolished building in which asphalt roofing has not been removed, provided that for each controlled burn of a demolished building the asphalt roofing material present has been tested to ensure that it does not contain asbestos. Each city’s limit on the burning of asphalt roofing shall include both the controlled burning of a demolished building and training fires, as specified in paragraph 23.2(3) “g.”

(5) *Building size limit.* For each proposed controlled burn located within the city limits, more than one demolished building may be included in the burn, provided that the sum total of all building material to be burned at a designated site does not exceed 1700 square feet in size. For a controlled burn site located outside the city limits, the sum total of all building material to be burned, per day, may not exceed 1700 square feet in size. For purposes of this subparagraph, “square feet” includes both finished and unfinished basements and excludes unfinished attics, carports, attached garages, and porches that are not protected from weather.

(6) *Time of day requirements.* The controlled burning of a demolished building may be conducted only between the hours of 6 a.m. and 6 p.m. and only when weather conditions are favorable with respect to surrounding property. The city shall adequately schedule and sufficiently control the burn to ensure that burning is completed by 6 p.m.

(7) *Prohibited materials.* Rubber tires, chemicals, furniture, carpeting, household appliances, vinyl products (such as flooring or siding), trade waste, garbage, rubbish, landscape waste, residential waste, and other nonstructural materials shall not be burned.

(8) *Limits on the number and location of burns.* For burns conducted within the city limits, each city may undertake no more than one controlled burn of demolished building material in every 0.6-mile-radius circle during each calendar year. For burn sites established outside the city limits, each city shall undertake no more than one controlled burn of demolished building material per day. A burn site outside the city limits must be located at least 0.6 of a mile from any building inhabited by a person, as “person” is defined in Iowa Code section 362.2(17).

(9) *Requirements for burn access and supervision.* The city shall control access to all demolished building burn sites. Representatives of the city who are city employees or who are hired by the city shall supervise the burning of demolished building material at all times.

(10) *Record-keeping requirements.* The city shall retain at least one copy of all notifications and supplementary information required to be sent to the department under subparagraph (2). Additionally, the city shall maintain a map of the exact location of each burn site, and supporting documentation showing the date of each demolished building burn and the square feet of building material burned on each date. All maps, notifications and associated records shall be maintained by the city clerk, as “clerk” is defined in Iowa Code section 362.2(7), for a period of at least three years and shall be made available for inspection by the department upon request.

(11) *Variance from this paragraph.* In accordance with 567—subrules 21.2(1) and 23.2(2), a city may apply for a variance from the specific conditions for controlled burning of a demolished building and may request that the director conduct a review of the ambient air impacts of the request. The director shall approve or deny the request in accordance with 567—subrule 21.2(4).

(12) *Compliance with other applicable environmental regulations.* Compliance with the exemption requirements in this paragraph shall not absolve a city of the responsibility to comply with any other applicable environmental regulations. In particular, a city conducting a controlled burn of a demolished building shall comply with all applicable solid waste disposal, including ash disposal, and solid waste



permitting rules contained in 567—Chapters 100 through 130, as well as all applicable storm water discharge and storm water permitting rules contained in 567—Chapters 60 and 64.

**23.2(4) Unavailability of exemptions in certain areas.** Notwithstanding 23.2(2) and 23.2(3) “b,” “d,” “f,” and “i,” no person shall allow, cause or permit the open burning of trees or tree trimmings, residential or landscape waste or agricultural structures in the cities of: Cedar Rapids, Marion, Hiawatha, Council Bluffs, Carter Lake, Des Moines, West Des Moines, Clive, Windsor Heights, Urbandale, and Pleasant Hill.

This rule is intended to implement Iowa Code section 455B.133.

**567—23.3(455B) Specific contaminants.**

**23.3(1) General.** The emission standards contained in this rule shall apply to each source operation unless a specific emission standard for the process involved is prescribed elsewhere in this chapter, in which case the specific standard shall apply.

**23.3(2) Particulate matter.** No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567—Chapter 24.

*a. General emission rate.*

(1) For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot (dscf) of exhaust gas, except as provided in 567—21.2(455B), 23.1(455B), 23.4(455B), and 567—Chapter 24.

(2) For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas, or established from standards provided in 23.1(455B) and 23.4(455B).

TABLE I  
ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE\*

Process Weight Rate		Emission Rate	Process Weight Rate		Emission Rate
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.55	16,000	8.00	16.5
200	0.10	0.88	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.00	25.2
800	0.40	2.22	40,000	20.00	30.5
1,000	0.50	2.58	50,000	25.00	35.4
1,500	0.75	3.38	60,000	30.00	40.0
2,000	1.00	4.10	70,000	35.00	41.3
2,500	1.25	4.76	80,000	40.00	42.5
3,000	1.50	5.38	90,000	45.00	43.6
3,500	1.75	5.96	100,000	50.00	44.6
4,000	2.00	6.52	120,000	60.00	46.3
5,000	2.50	7.58	140,000	70.00	47.8
6,000	3.00	8.56	160,000	80.00	49.0
7,000	3.50	9.49	200,000	100.00	51.2
8,000	4.00	10.4	1,000,000	500.00	69.0
9,000	4.50	11.2	2,000,000	1,000.00	77.6
10,000	5.00	12.0	6,000,000	3,000.00	92.7
12,000	6.00	13.6			

\*Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by the use of the equation

$$E=4.10 P^{0.67},$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation

$$E=55.0 P^{0.11}-40,$$

where E = rate of emission in lb/hr, and

P = process weight in tons/hr

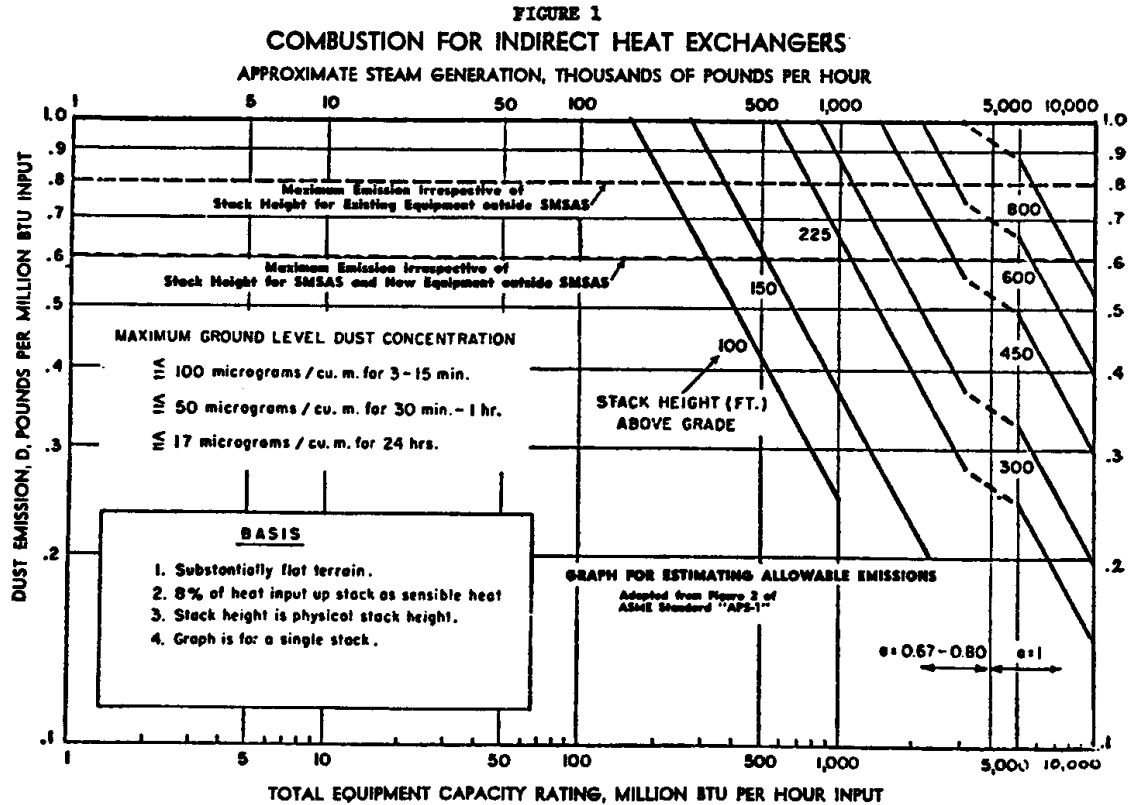
*b. Combustion for indirect heating.* Emissions of particulate matter from the combustion of fuel for indirect heating or for power generation shall be limited by the ASME Standard APS-1, Second Edition, November, 1968, "Recommended Guide for the Control of Dust Emission—Combustion for Indirect Heat Exchangers." For the purpose of this paragraph, the allowable emissions shall be calculated from equation (15) in that standard, with  $C_{max}^2=50$  micrograms per cubic meter. Allowable emissions from a single stack may be estimated from Figure 1. The maximum ground level dust concentrations designated are above the background level. For plants with 4,000 million Btu/hour input or more, the "a" factor shall be 1.0. In plants with less than 4,000 million Btu/hour input, appropriate "a" factors, less than 1.0, shall be applied. Pertinent correction factors, as specified in the standard, shall be applied for installations with multiple stacks. However, for fuel-burning units in operation on January 13, 1976, the maximum allowable emissions calculated under APS-1 for the facility's equipment configuration on January 13, 1976, shall not be increased even if the changes in the equipment or stack configuration would otherwise allow a recalculation and a higher maximum allowable emission under APS-1.

(1) Outside any standard metropolitan statistical area, the maximum allowable emissions from each stack, irrespective of stack height, shall be 0.8 pounds of particulates per million Btu input.

(2) Inside any standard metropolitan statistical area, the maximum allowable emission from each stack, irrespective of stack height, shall be 0.6 pounds of particulates per million Btu input.

(3) For a new fossil fuel-fired steam generating unit of more than 250 million Btu per hour heat input, 23.1(2) "a" shall apply. For a new unit of between 150 million and 250 million (inclusive) Btu per hour heat input, the maximum allowable emissions from such new unit shall be 0.2 pounds of particulates per million Btu of heat input. For a new unit of less than 150 million Btu per hour heat input, the maximum allowable emissions from such new unit shall be 0.6 pounds of particulates per million Btu of heat input.

(4) Measurements of emissions from a particulate source will be made in accordance with the provisions of 567—Chapter 25.



(5) For fuel-burning sources in operation prior to July 29, 1977, which are not subject to 23.1(2) and which significantly impact a primary or secondary particulate standard nonattainment area, the emission limitations specified in this subparagraph apply. A significant impact shall be equal to or exceeding 5 micrograms of particulate matter per cubic meter of air (24-hour average) or 1 microgram of particulate matter per cubic meter of air (annual average) determined by an EPA approved single source dispersion model using allowable emission rates and five-year worst case meteorological conditions. In the case where two or more boilers discharge into a common stack, the applicable stack emission limitation shall be based upon the heat input of the largest operating boiler. The plantwide allowable emission limitation shall be the weighted average of the allowable emission limitations for each stack or the applicable APS-1 plantwide standard as determined under paragraph 23.3(2) "b," whichever is more stringent.

The maximum allowable emission rate for a single stack with a total heat input capacity less than 250 million Btu per hour shall be 0.60 pound of particulate matter per million Btu heat input; the maximum allowable emission rate for a single stack with a total heat input capacity greater than or equal to 250 million Btu per hour and less than 500 million Btu per hour shall be 0.40 pound of particulate matter per million Btu heat input; the maximum allowable emission rate for a single stack with a total heat input capacity greater than or equal to 500 million Btu per hour shall be 0.30 pound of particulate matter per million Btu heat input; except that the maximum allowable emission rate for the stack serving Unit #1 of Iowa Public Service at Port Neal shall be 0.50 pound of particulate matter per million Btu heat input.

All sources regulated under this subparagraph shall demonstrate compliance by October 1, 1981; however, a source is considered to be in compliance with this subparagraph if by October 1, 1981, it is on a compliance schedule to be completed as expeditiously as possible, but no later than December 31, 1982.

*c. Fugitive dust.*

(1) Attainment and unclassified areas. A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported

or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.

2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.

3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer or limestone.

4. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.

5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

(2) *Nonattainment areas.* Subparagraph (1) notwithstanding, no person shall allow, cause or permit any visible emission of fugitive dust in a nonattainment area for particulate matter to go beyond the lot line of the property on which a traditional source is located without taking reasonable precautions to prevent emission. Traditional source means a source category for which a particulate emission standard has been established in 23.1(2), 23.3(2) "a," 23.3(2) "b" or 23.4(455B) and includes a quarry operation, haul road or parking lot associated with a traditional source. This paragraph does not modify the emission standard stated in 23.1(2), 23.3(2) "a," 23.3(2) "b" or 23.4(455B), but rather establishes a separate requirement for fugitive dust from such sources. For guidance on the types of controls which may constitute reasonable precautions, see "Identification of Techniques for the Control of Industrial Fugitive Dust Emissions," [available from the department] adopted by the commission on May 19, 1981.

(3) *Reclassified areas.* Reasonable precautions implemented pursuant to the nonattainment area provisions of subparagraph (2) shall remain in effect if the nonattainment area is redesignated to either attainment or unclassified after March 6, 1980.

*d. Visible emissions.* No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567—Chapter 24.

- (1) *Residential heating equipment.* Residential heating equipment serving dwellings of four family units or less is exempt.

- (2) *Gasoline-powered vehicles.* No person shall allow, cause or permit the emission of visible air contaminants from gasoline-powered motor vehicles for longer than five consecutive seconds.

- (3) *Diesel-powered vehicles.* No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered motor vehicles in excess of 40 percent opacity, for longer than five consecutive seconds.

- (4) *Diesel-powered locomotives.* No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered locomotives in excess of 40 percent opacity, except for a maximum period of 40 consecutive seconds during acceleration under load, or for a period of four consecutive minutes when a locomotive is loaded after a period of idling.

(5) *Startup and testing.* Initial start and warmup of a cold engine, the testing of an engine for trouble, diagnosis or repair, or engine research and development activities, is exempt.

(6) *Uncombined water.* The provisions of this paragraph shall apply to any emission which would be in violation of these provisions except for the presence of uncombined water, such as condensed water vapor.

**23.3(3) Sulfur compounds.** The provisions of this subrule shall apply to any installation from which sulfur compounds are emitted into the atmosphere.

*a. Sulfur dioxide from use of solid fuels.*

(1) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel-burning unit, (i.e., a unit which was in operation or for which components had been purchased, or which was under construction prior to September 23, 1970), in an amount greater than 6 pounds, replicated maximum three-hour average, per million Btu of heat input if such unit is located within the following counties: Black Hawk, Clinton, Des Moines, Dubuque, Jackson, Lee, Linn, Lousia, Muscatine and Scott.

(2) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel-burning unit, (i.e., a unit which was in operation or for which components had been purchased, or which was under construction prior to September 23, 1970), in an amount greater than 5 pounds, replicated maximum three-hour average, per million Btu of heat input if such unit is located within the remaining 89 counties of the state not listed in subparagraph 23.3(3)“a”(1).

(3) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from any new solid fuel-burning unit (i.e., a unit which was not in operation or for which components had not been purchased, or which was not under construction prior to September 23, 1970) which has a capacity of 250 million Btu or less per hour heat input, in an amount greater than 6 pounds, replicated maximum three-hour average, per million Btu of heat input.

(4) Subparagraphs (1) through (3) notwithstanding, a fossil fuel-fired steam generator to which 23.1(2)“a,” 23.1(2)“z” or 23.1(2)“ccc” applies shall comply with 23.1(2)“a,” 23.1(2)“z” or 23.1(2)“ccc,” respectively.

*b. Sulfur dioxide from use of liquid fuels.*

(1) No person shall allow, cause, or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

(2) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere in an amount greater than 2.5 pounds of sulfur dioxide, replicated maximum three-hour average, per million Btu of heat input from a liquid fuel-burning unit.

(3) Notwithstanding this paragraph, a fossil fuel-fired steam generator to which 23.1(2)“a,” 23.1(2)“z” or 23.1(2)“ccc” applies shall comply with 23.1(2)“a,” 23.1(2)“z” or 23.1(2)“ccc.”

*c. Sulfur dioxide from sulfuric acid manufacture.* After January 1, 1975, no person shall allow, cause or permit the emission of sulfur dioxide from an existing sulfuric acid manufacturing plant in excess of 30 pounds of sulfur dioxide, maximum three-hour average, per ton of product calculated as 100 percent sulfuric acid.

*d. Acid mist from sulfuric acid manufacture.* After January 1, 1974, no person shall allow, cause or permit the emission of acid mist calculated as sulfuric acid from an existing sulfuric acid manufacturing plant in excess of 0.5 pounds, maximum three-hour average, per ton of product calculated as 100 percent sulfuric acid.

*e. Other processes capable of emitting sulfur dioxide.* After January 1, 1974, no person shall allow, cause or permit the emission of sulfur dioxide from any process, other than sulfuric acid manufacture, in excess of 500 parts per million, based on volume. This paragraph shall not apply to devices which have been installed for air pollution abatement purposes where it is demonstrated by the owner of the source that the ambient air quality standards are not being exceeded.

This rule is intended to implement Iowa Code section 455B.133.

**567—23.4(455B) Specific processes.**

**23.4(1) General.** The provisions of this rule shall not apply to those facilities for which performance standards are specified in 23.1(2). The emission standards specified in this rule shall apply and those specified in 23.3(2) "a" and 23.3(2) "b" shall not apply to each process of the types listed in the following subrules, except as provided below.

EXCEPTION: Whenever the director determines that a process complying with the emission standard prescribed in this section is causing or will cause air pollution in a specific area of the state, the specific emission standard may be suspended and compliance with the provisions of 23.3(455B) may be required in such instance.

**23.4(2) Asphalt batching plants.** No person shall cause, allow or permit the operation of an asphalt batching plant in a manner such that the particulate matter discharged to the atmosphere exceeds 0.15 grain per standard cubic foot of exhaust gas.

**23.4(3) Cement kilns.** Cement kilns shall be equipped with air pollution control devices to reduce the particulate matter in the gas discharged to the atmosphere to no more than 0.3 percent of the particulate matter entering the air pollution control device. Regardless of the degree of efficiency of the air pollution control device, particulate matter discharged from such kilns shall not exceed 0.1 grain per standard cubic foot of exhaust gas.

**23.4(4) Cupolas for metallurgical melting.** The emissions of particulate matter from all new foundry cupolas, and from all existing foundry cupolas with a process weight rate in excess of 20,000 pounds per hour, shall not exceed the amount specified in paragraph 23.3(2) "a," except as provided in 567—Chapter 24.

The emissions of particulate matter from all existing foundry cupolas with a process weight rate less than or equal to 20,000 pounds per hour shall not exceed the amount determined from Table II of these rules, except as provided in 567—Chapter 24.

TABLE II  
ALLOWABLE EMISSIONS FROM  
EXISTING SMALL FOUNDRY CUPOLAS

Process weight rate (lb/hr)	Allowable emission (lb/hr)
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

**23.4(5) Electric furnaces for metallurgical melting.** The emissions of particulate matter to the atmosphere from electric furnaces used for metallurgical melting shall not exceed 0.1 grain per standard cubic foot of exhaust gas.

**23.4(6) Sand handling and surface finishing operations in metal processing.** This subrule shall apply to any new foundry or metal processing operation not properly termed a combustion, melting, baking or pouring operation. For purposes of this subrule, a new process is any process which has not started operation, or the construction of which has not been commenced, or the components of which have not been ordered or contracts for the construction of which have not been let on August 1, 1977. No person shall allow, cause or permit the operation of any equipment designed for sand shakeout, mulling, molding, cleaning, preparation, reclamation or rejuvenation or any equipment for abrasive cleaning, shot blasting, grinding, cutting, sawing or buffing in such a manner that particulate matter discharged from any stack exceeds 0.05 grains per dry standard cubic foot of exhaust gas, regardless of the types and number of operations that discharge from the stack.

**23.4(7) Grain handling and processing plants.** The owner or operator of equipment at a permanent installation for the handling or processing of grain, grain products and grain by-products shall not cause, allow or permit the particulate matter discharged to the atmosphere to exceed 0.1 grain per dry standard cubic foot of exhaust gas, except as follows:

*a.* The particulate matter discharged to the atmosphere from a grain bin vent at a country grain elevator, as “country grain elevator” is defined in 567—subrule 22.10(1), shall not exceed 1.0 grain per dry standard cubic foot of exhaust gas.

*b.* The particulate matter discharged to the atmosphere from a grain bin vent that was constructed, modified or reconstructed before March 31, 2008, at a country grain terminal elevator, as “country grain terminal elevator” is defined in 567—subrule 22.10(1), or at a grain terminal elevator, as “grain terminal elevator” is defined in 567—subrule 22.10(1), shall not exceed 1.0 grain per dry standard cubic foot of exhaust gas.

*c.* The particulate matter discharged to the atmosphere from a grain bin vent that is constructed or reconstructed on or after March 31, 2008, at a country grain terminal elevator, as “country grain terminal elevator” is defined in 567—subrule 22.10(1), or at a grain terminal elevator, as “grain terminal elevator” is defined in 567—subrule 22.10(1), shall not exceed 0.1 grain per dry standard cubic foot of exhaust gas.

**23.4(8) Lime kilns.** No person shall cause, allow or permit the operation of a kiln for the processing of limestone such that the particulate matter in the gas discharged to the atmosphere exceeds 0.1 grain per standard cubic foot of exhaust gas.

**23.4(9) Meat smokehouses.** No person shall cause, allow or permit the operation of a meat smokehouse or a group of meat smokehouses, which consume more than ten pounds of wood, sawdust or other material per hour such that the particulate matter discharged to the atmosphere exceeds 0.2 grain per standard cubic foot of exhaust gas.

**23.4(10) Phosphate processing plants.**

*a.* Phosphoric acid manufacture. No person shall allow, cause or permit the operation of equipment for the manufacture of phosphoric acid that was in existence on October 22, 1974, in a manner that produces more than 0.04 pound of fluoride per ton of phosphorous pentoxide or equivalent input.

*b.* Diammonium phosphate manufacture. No person shall allow, cause or permit the operation of equipment for the manufacture of diammonium phosphate that was in existence on October 22, 1974, in a manner that produces more than 0.15 pound of fluoride per ton of phosphorous pentoxide or equivalent input.

*c.* Nitrophosphate manufacture. No person shall allow, cause or permit the operation of equipment for the manufacture of nitrophosphate in a manner that produces more than 0.06 pound of fluoride per ton of phosphorus pentoxide or equivalent input.

*d.* No person shall allow, cause or permit the operation of equipment for the processing of phosphate ore, rock or other phosphatic material (other than equipment used for the manufacture of phosphoric acid, diammonium phosphate or nitrophosphate) in a manner that the unit emissions of fluoride exceed 0.4 pound of fluoride per ton of phosphorous pentoxide or its equivalent input.

*e.* Notwithstanding “*a*” through “*d*,” no person shall allow, cause or permit the operation of equipment for the processing of phosphorous ore, rock or other phosphatic material including, but not limited to, phosphoric acid, in a manner that emissions of fluorides exceed 100 pounds per day.

*f.* “Fluoride” means elemental fluorine and all fluoride compounds as measured by reference methods specified in Appendix A to 40 CFR Part 60 as amended through March 12, 1996.

*g.* Calculation. The allowable total emission of fluoride shall be calculated by multiplying the unit emission specified above by the expressed design production capacity of the process equipment.

**23.4(11) Portland cement concrete batching plants.** No person shall cause, allow or permit the operation of a Portland cement concrete batching plant such that the particulate matter discharged to the atmosphere exceeds 0.1 grain per standard cubic foot of exhaust gas.

**23.4(12) Incinerators.** A person shall not cause, allow or permit the operation of an incinerator unless provided with appropriate control of emissions of particulate matter and visible air contaminants.

*a. Particulate matter.* A person shall not cause, allow or permit the operation of an incinerator with a rated refuse burning capacity of 1000 or more pounds per hour in a manner such that the particulate matter discharged to the atmosphere exceeds 0.2 grain per standard cubic foot of exhaust gas adjusted to 12 percent carbon dioxide.

A person shall not cause, allow or permit the operation of an incinerator with a rated refuse burning capacity of less than 1000 pounds per hour in a manner such that the particulate matter discharged to the atmosphere exceeds 0.35 grain per standard cubic foot of exhaust gas adjusted to 12 percent carbon dioxide.

*b. Visible emissions.* A person shall not allow, cause or permit the operation of an incinerator in a manner such that it produces visible air contaminants in excess of 40 percent opacity; except that visible air contaminants in excess of 40 percent opacity but less than or equal to 60 percent opacity may be emitted for periods aggregating not more than 3 minutes in any 60-minute period during an operation breakdown or during the cleaning of air pollution control equipment.

**23.4(13) Painting and surface-coating operations.** No person shall allow, cause or permit painting and surface-coating operations in a manner such that particulate matter in the gas discharge exceeds 0.01 grain per standard cubic foot of exhaust gas.

This rule is intended to implement Iowa Code section 455B.133.

#### **567—23.5(455B) Anaerobic lagoons.**

**23.5(1)** Applications for construction permits for animal feeding operations using anaerobic lagoons shall meet the requirements of rules 567—65.9(455B) and 65.15(455B) to 65.17(455B).

**23.5(2)** Criteria for approval of industrial anaerobic lagoons.

*a.* Lagoons designed to treat 100,000 gpd or less.

(1) The sulfate content of the water supply shall not exceed 250 mg/l. However, this paragraph does not apply to an expansion of an industrial anaerobic lagoon facility which was constructed prior to February 22, 1979.

(2) The design loading rate for the total lagoon volume shall not be less than 10 pounds nor more than 20 pounds of biochemical oxygen demand (five day) per thousand cubic feet per day.

*b.* Lagoons designed to treat more than 100,000 gpd.

(1) The sulfate content of the water supply shall not exceed 100 mg/l. However, this paragraph does not apply to an expansion of an industrial anaerobic lagoon facility which was constructed prior to February 22, 1979.

(2) The design loading rate for the total lagoon volume shall not be less than 10 pounds nor more than 20 pounds of biochemical oxygen demand (five day) per thousand cubic feet per day.

This rule is intended to implement Iowa Code section 455B.133.

**567—23.6(455B) Alternative emission limits (the “bubble concept”).** Emission limits for individual emission points included in 23.3(455B) (except 23.3(2)“*d*,”23.3(2)“*b*”(3), and 23.3(3)“*a*”(3)) and 23.4(455B) (except 23.4(12)“*b*” and 23.4(6)) may be replaced by alternative emission limits. The alternative emission limits must be consistent with 567—22.7(455B) and 567—subrule 25.1(12).



Under this rule, less stringent control limits where costs of emission control are high may be allowed in exchange for more stringent control limits where costs of control are less expensive.

Rules 23.3(455B) to 23.6(455B) are intended to implement Iowa Code section 455B.133.

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<sup>◇</sup> Two or more ARCs

<sup>1</sup> Objection, see filed rule [DEQ, 4.2(4)] published IAC Supp. 1/22/77, 3/9/77.

<sup>2</sup> Effective date of 23.2(4) delayed 70 days by the Administrative Rules Review Committee on 9/14/83.