

JEFFERSON COUNTY BOARD OF HEALTH



AIR POLLUTION CONTROL RULES AND REGULATIONS

Revised August 14, 2024



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JEFFERSON COUNTY BOARD OF HEALTH AIR POLLUTION CONTROL RULES AND REGULATIONS

Adopted by the Jefferson County Board of Health on January 28, 1972, pursuant to the authority contained in the Alabama Air Pollution Control Act of 1971 and after public hearing which were held on January 7 and 8, 1972, in Birmingham, Alabama.

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CHAPTER 1 - GENERAL PROVISIONS

(Adopted January 28, 1972. Revised November 13, 1985; April 8, 1987; February 8, 1989; September 13, 1989; October 10, 1990; May 8, 1991, September 11, 1991; December 8, 1993; January 10, 1996; March 11, 1998; December 9, 1998; July 14, 1999; October 13, 1999; November 8, 2000; May 8, 2002; November 12, 2003; May 10, 2006; June 13, 2007; May 14, 2008; May 12, 2010; May 8, 2013; May 11, 2016; and August 14, 2024)

1.1 Declaration of Policy and Purpose

1.1.1 It is hereby declared to be the public policy of the Jefferson County Board of Health and the purpose of these regulations to achieve and maintain such levels of air quality as will protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the social development of Jefferson County and facilitate the enjoyment of the natural attractions of this County.

1.1.2 To these ends it is the purpose of these regulations to provide for a coordinated program of air pollution prevention, abatement and control in Jefferson County; to facilitate cooperation with the Environmental Management Commission of Alabama and its technical staff; and to provide a framework consistent with Act 769, Alabama Legislature, Regular Session 1971, within which all values may be balanced in the public interest.

1.2 Structure and Numbering of Rules and Regulations.

1.2.1 Title and Scope. The provisions contained in these rules and regulations shall be known and may be cited as the Jefferson County Air Pollution Control Rules and Regulations, and shall apply to all activities and all persons in Jefferson County, Alabama, including Federal Activities.

1.2.2 Chapters. The normal division of these rules and regulations are chapters, which should encompass a broad subject matter. Chapters are numbered consecutively in Arabic throughout the rules and regulations.

1.2.3 Parts. The normal division of chapters is parts. A part should be devoted to a specific subject matter within a chapter. Parts are numbered consecutively in Arabic throughout each chapter and shall include the number of the chapter set off by a decimal point. Thus, the part number for Part 15 within Chapter 3 is 3.15.

1.2.4 Sections. The normal division of parts is sections. The section is the basic unit of these rules and regulations. Sections are numbered consecutively in Arabic throughout each part and shall include the numbers of the part set off by a decimal point. Thus, the section number for Section 26 of Part 3.15 is 3.15.26.

1.2.5 Internal Division of Sections. Whenever internal divisions are necessary, sections shall be subdivided into paragraphs, paragraphs into subparagraphs, and subparagraphs into subdivisions designated as follows:

Terminology	Illustrative Symbol
Paragraph	(a)
Subparagraph	(1)
Subdivision	(i)
Clause	(A)

1.2.6 Promulgation Procedure. All requirements and provisions subject to inclusion in these rules and regulations shall be drafted as amendments to the Jefferson County Air Pollution Control Rules and Regulations and prepared in accordance with the provisions of this part and with, insofar as it applies and does not conflict with this part, the provisions of Part 17 of Title 1 of the Code of Federal Regulations (Filing For Public Inspection and Publication Schedules), as the same may be amended or revised.

1.2.7 Relation Back of Amendments. Whenever any provisions of an amendment relates, either directly or indirectly, to an already applicable rule or regulation set forth herein, the amendment relates back to the date of initial adoption or promulgation of such rule or regulation, unless such amendment or the promulgating statement clearly evidences otherwise.

1.3 Definitions.

As used in these rules and regulations, terms shall have the meanings ascribed in this part.

"40 CFR 60" shall be an acronym for Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised. (Adopted September 13, 1989).

"Act" shall mean the Alabama Air Pollution Control Act of 1971, Act No. 769, Regular Session, 1971.

"Air Contaminant" shall mean any solid, liquid, or gaseous matter, any odor, or any combination thereof, from whatever source.

"Air Pollution" shall mean the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life, or property, or would interfere with the enjoyment of life or property throughout the County and in such territories of the County as shall be affected thereby.

"Air Pollution Emergency" shall mean a situation in which meteorological conditions and/or contaminant levels in the ambient air reach or exceed the levels which may cause imminent and substantial endangerment to health.

"Ambient Air" shall mean that portion of the atmosphere, external to buildings, to which the general public has access.

"Annual Rolling Average" shall mean the method of demonstrating compliance with an annual emission rate restriction of a permit condition of an Air Permit, or, to keep annual emissions below a regulation's emissions applicability level. At the end of each calendar month, a source shall demonstrate compliance with an annual emission rate restriction for the previous twelve (12) consecutive month period.

"Board" shall mean the Jefferson County Board of Health.

"Capture System" shall mean the equipment (including hoods, ducts, fans, etc.) used to contain, capture, or transport a pollutant to a control device or an exhaust system.

"Chairman" shall mean the Chairman of the Jefferson County Board of Health.

"Coating" shall mean a protective, decorative, or functional film applied in a thin layer to a surface substrate. (Adopted September 13, 1989).

"Coating Applicator" shall mean an apparatus used to apply a surface coating.

"Coating Line" shall mean one or more apparatus or operations which may include any number or combination of coating applicators, flash-off areas, and ovens wherein a surface coating is applied, dried, and/or cured. (Revised September 13, 1989).

"Commenced" shall mean that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a binding agreement or contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

"Commission" shall mean the "Environmental Management Commission of the State of Alabama" established by the Act.

"Construction" shall mean fabrication, erection, or installation of an affected facility.

"Continuous Vapor Control System" shall mean a vapor control system that treats vapors displaced from tanks during filling on a demand basis without intermediate accumulation.

"Control Device" shall mean any device which has the function of controlling the emissions from a process, fuel-burning, or refuse-burning device and thus reduces the creation of, or the emission of, air contaminants into the atmosphere, or both. (Revised February 8, 1989).

"County" shall mean Jefferson County, Alabama.

"Day" shall mean a 24-hour period beginning at midnight.

"Department" shall mean the Jefferson County Department of Health.

"Director" shall mean the Director of the Environmental Health Services of the Jefferson County Department of Health, or in his absence, the Assistant Director of the Environmental Health Services.

"Effluent Water Separator" shall mean any tank, box, sump, or other container in which any volatile organic compound floating on or entrained or contained in water entering such tank, box, sump, or other container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

"Emission" shall mean a release into the outdoor atmosphere of air contaminants.

"Employee" shall mean any employee of the Jefferson County Department of Health. (Adopted February 8, 1989).

"EPA" shall be an acronym for The United States Environmental Protection Agency. (Adopted September 13, 1989).

"Existing Source" shall mean any source in operation or on which construction has commenced on the date of initial adoption of an applicable rule or regulation; except that any existing source which has undergone modification after the date of initial adoption of an applicable rule or regulations, shall be reclassified and considered a new source.

"FR" shall be an acronym for Federal Register. (Adopted September 13, 1989).

"Federal Act" shall mean the Clean Air Act (42 U.S.C. 1857 et seq.) as last amended, and as may hereafter be amended.

"Flash-off Area" shall mean the space between the application area and the oven.

"Fuel-Burning Equipment" shall mean any equipment, device or contrivance and all appurtenances thereto, including ducts, breechings, fuel-feeding equipment, ash removal equipment, combustion controls, stacks and chimneys, used primarily, but not exclusively, to burn any type fuel for the purpose of indirect heating in which the material being heated is not contacted by and adds no substance to the products of combustion.

"Fugitive Dust" shall mean solid air-borne particulate matter emitted from any source other than a flue or stack.

"Gasoline" shall mean a petroleum distillate having a Reid vapor pressure of 27.6 KPA (4 psia) or greater and used as a fuel for internal combustion engines.

"Health Officer" shall mean the Health Officer of Jefferson County Department of Health or his designee.

"Heat Available" shall mean the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks.

"Hydrocarbon" shall mean any organic compound of carbon and hydrogen only.

"Incinerator" shall mean any equipment, device or contrivance and all appurtenances thereof used for the destruction by burning of solid, semi-solid, liquid, or gaseous combustible wastes.

"Intermediate Vapor Control System" shall mean a vapor control system that employs an intermediate vapor holder to accumulate vapors displaced from tanks during filling. The control device treats the accumulated vapors only during automatically controlled cycles.

"Loading Rack" shall mean an aggregation or combination of gasoline loading equipment arranged so that all loading outlets in the combination can be connected to a tank truck or trailer parked in a specified loading space.

"Low-Use Coating" shall mean a coating or an aggregate of coatings used in quantities of 55 gallons or less per year for intermittent or specialty-type operations within a single facility. Yearly usage is based on an annual rolling average. (Adopted May 8, 1991).

"Maximum Process Weight per Hour" shall mean the equipment manufacturer's or designer's guaranteed maximum (whichever is greater) process weight per hour.

"Model Year" shall mean the annual production period of new motor vehicles designated by the calendar year in which such period ends, provided that if the manufacturer does not so designate vehicles manufactured by him, the model year with respect to such vehicles shall mean the twelve month period beginning January 1 of the year specified herein.

"Modification" shall mean any physical change in, or change in the method of operation of, an affected source which increases the amount of any air contaminant (to which a rule or regulation applies) emitted by such source or which results in the emission of any air contaminant (to which a rule or regulation applies) not previously emitted, except that:

- (a) Routine maintenance, repair, and replacement shall not be considered physical changes, and
- (b) The following shall not be considered a change in the method of operation:
 - (1) An increase in the production rate;
 - (2) An increase in hours of operation;
 - (3) Use of an alternate fuel or raw material.

"Motor Vehicle" shall mean every self-propelled device in or upon by which any person or property is, or may be, transported or drawn upon a public highway.

"New Source" shall mean any source built or installed on or after the date of initial adoption of an applicable rule or regulation and any source existing at said stated time which later undergoes modification. Any source moved to another premise involving a change of location after the date of initial adoption or an applicable rule or regulation shall be considered a new source. This definition of new source is not applicable to Sections 13.1.3 or 14.1.3.

"Notice of Violation" shall mean the written notification of a finding of violation of any Federal or State requirement delegated to the Jefferson County Department of Health for enforcement or local air pollution control regulation, issued to any person, or owner or operator of an air pollution source. (Adopted May 8, 1991).

"Odor" shall mean smells or aromas which are unpleasant to persons, or which tend to lessen human food and water intake, interfere with sleep, upset appetite, produce irritation of the upper respiratory tract, or cause symptoms of nausea, or which by their inherent chemical or physical nature, or method of processing, are, or may be, detrimental or dangerous to health. Odor and smell are used interchangeably herein.

"Opacity" shall mean the degree to which emissions reduce the transmission of light and obscure the view of the background.

"Open Burning" shall mean the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through an adequate stack, duct, or chimney.

"Operating Time" shall mean the number of hours per year that a source conducts operations.

"Organic Material" shall mean a chemical compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

"Oven" shall mean a chamber within which heat is used to bake, cure, polymerize, and/or dry a surface coating.

"Owner or Operator" shall mean any person who owns, leases, operates, controls or supervises an affected facility, article, machine, equipment, other contrivance, or source.

"Particulate Matter" shall mean any airborne finely divided material, except uncombined water, which is a liquid or solid at the conditions of the applicable test reference method. (Revised February 8, 1989).

"Particulate Matter Emissions" shall mean all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR 60, Appendix A. (Adopted February 8, 1989).

"Person" shall mean the State, any individual partnership, firm association, municipality, public or private corporation or institution, political subdivision or agency of the State, including any Environmental Improvement Authority established pursuant to Act Number 1117, Regular Session of 1969 (General Acts 1969, p.2060), any trust, estate, or any other legal entity and any successor, representative, agent, or agency of the foregoing, the United States or any department, agency or instrumentality of the executive, legislative or judicial branches of the Federal Government.

"PM₁₀" shall mean particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on 40 CFR 50, Appendix J, and designated in accordance with 40 CFR 53, or by an equivalent method designated in accordance with 40 CFR 53. (Adopted February 8, 1989).

"PM₁₀ emission" shall mean finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternative method, specified in 40 CFR. (Adopted February 8, 1989).

"Prime Coat" shall mean the first film of coating applied in a multiple coat operation.

"Process" shall mean any action, operation, or treatment of materials, including handling and storage thereof, which may cause discharge of an air contaminant, or contaminants, into the atmosphere, but excluding fuel burning and refuse burning.

"Process Weight" shall mean the total weight in pounds of all materials introduced into any specific process which may cause any discharge into the atmosphere.

"Process Weight per Hour" shall mean the total weight of all materials introduced into any specific process that may cause any discharge of particulate matter. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not. For a cyclic or batch operation, the process weight per hour will be derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour will be derived by dividing the process weight for a typical period of time by that time period.

"Refuse" shall mean matter consisting of garbage, rubbish, ashes, street debris, dead animals, abandoned vehicles, industrial wastes, demolition wastes, construction wastes, special wastes, or sewage treatment residue.

"Reid Vapor Pressure" shall mean a vapor pressure specification for volatile crude oil and volatile nonviscous petroleum liquid except liquid petroleum gases as determined by American Society for Testing and Materials. The pressure approximates the absolute vapor pressure of the liquid.

"Shutdown" shall mean the cessation of operation of affected sources or emission control equipment.

"SIP" shall be an acronym for State Implementation Plan. (Adopted September 13, 1989).

"Six-Minute Average" shall be determined by calculating the arithmetic mean of twenty-four (24) consecutive opacity observations, taken at intervals of fifteen (15) seconds.

"Smoke" shall mean gas-borne particles resulting from incomplete combustion consisting predominantly, but not exclusively, of carbon, ashes, or other combustible material.

"Soiling Index" shall mean a measure of the soiling properties of total suspended particles in air determined by drawing a measured volume of air through a known area of Whatman No. 4 filter paper for a measured period of time, expressed as COHs/1000 linear feet. (Revised February 8, 1989).

"Solvent" shall mean organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

"Source" shall mean any building, structure, facility, installation, article, machine, equipment, device, or other contrivance which emits or may emit any air contaminant. Any activity which utilizes abrasives or chemicals for cleaning or any other purpose (such as cleaning the exterior of buildings) which emits air contaminants shall be considered a source.

"Stack or Ducts" shall mean any flue duct, or other contrivance arranged to conduct emissions to the open air.

"Standard Conditions" shall mean a temperature of 20°C (68°F) and pressure of 760 millimeters of mercury (29.92 inches of mercury).

"Startup" shall mean the setting in operation of an affected source for any purpose.

"State" shall mean the State of Alabama, the Environmental Management Commission, and the Commission's representatives.

"Storage Tank Capacity" shall mean the tank manufacturer's design capacity. Storage tank and storage vessel shall be equivalent in meaning. (Adopted September 13, 1989).

"Submerged Fill Pipe" shall mean any fill pipe, the discharge opening of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean any fill pipe, the discharge opening of which is entirely submerged when the liquid level is two times the fill pipe diameter, in inches, above the bottom of the tank.

"Topcoat" shall mean the final film of coating applied in a multiple coat operation.

"Total Reduced Sulfur (TRS)" shall mean hydrogen sulfide, mercaptans, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides present.

"Total Suspended Particulate" shall mean particulate matter as measured by the method described in 40 CFR 50, Appendix B. (Adopted February 8, 1989).

"Transfer Efficiency (TE)" shall mean the efficiency of a surface coating application system to deposit coating solids on a substrate. The transfer efficiency of an application system is determined by dividing the volume of coating solids deposited on a substrate by the total volume of coating solids used. (Adopted September 13, 1989).

"True Vapor Pressure" shall mean the equilibrium partial pressure exerted by a stored petroleum liquid at the temperature equal to the highest calendar-month average of the liquid storage temperature as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, "Evaporation Loss from External Floating Roof Tanks," 1962 Second Edition, February 1980. (Revised September 13, 1989).

"Uncombined Water" shall mean any water droplets or water vapor condensate that does not contain any other solid or liquid particulate matter attached to the water droplets.

"Vapor Collection System" shall mean a vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system.

"Vapor Recovery System" shall mean a system that prevents release to the atmosphere at least 90 percent by weight of organic compounds in the vapor displaced from a tank during the transfer of gasoline.

"Violator" shall mean any person who is issued a Notice of Violation by the Health Officer. (Adopted February 8, 1989; Revised May 8, 1991).

"Volatile Organic Compound (VOC)" shall mean any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes any such organic compound **other than the following**:

1. Methane;
2. Ethane;
3. Methyl Chloroform (1,1,1-Trichloroethane);
4. Methylene Chloride (Dichloromethane);
5. CFC-11 (Trichlorofluoromethane);
6. CFC-12 (Dichlorodifluoromethane);
7. HCFC-22 (Chlorodifluoromethane);
8. HFC-23 (Trifluoromethane);
9. CFC-114 (1,2-Dichloro-1,1,2,2-tetrafluoroethane);
10. CFC-115 (Chloropentafluoroethane);
11. HCFC-123 (1,1,1-Trifluoro-2,2-dichloroethane);
12. HCFC-124 (2-Chloro-1,1,1,2-tetrafluoroethane);
13. HFC-125 (Pentafluoroethane);
14. HFC-134 (1,1,2,2-Tetrafluoroethane);
15. HFC-134a (1,1,1,2-Tetrafluoroethane);
16. HCFC-141b (1,1-Dichloro-1-fluoroethane);
17. HCFC-142b (1-Chloro-1,1-difluoroethane);
18. HFC-143a (1,1,1-Trifluoroethane);
19. HFC-152a (1,1-Difluoroethane);
20. CFC-113 (1,1,2-Trichloro-1,2,2-trifluoroethane);
21. Parachlorobenzotrifluoride (PCBTF);
22. Cyclic, branched, or linear, completely methylated siloxanes;
23. Acetone;
24. Perchloroethylene (Tetrachloroethylene);
25. 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca);
26. 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb);
27. 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
28. HFC-32 (Difluoromethane);
29. HFC-161 (Ethylfluoride);
30. HFC-236fa (1,1,1,3,3,3-Hexafluoropropane);
31. HFC-245ca (1,1,2,2,3- Pentafluoropropane);
32. HFC-245ea (1,1,2,3,3- Pentafluoropropane);
33. HFC-245eb (1,1,1,2,3- Pentafluoropropane);
34. HFC-245fa (1,1,1,3,3- Pentafluoropropane);
35. HFC-236ea (1,1,1,2,3,3-Hexafluoropropane);
36. HFC-365mfc (1,1,1,3,3- Pentafluorobutane);
37. HCFC-31 (Chlorofluoromethane);
38. HCFC-123a (1,2-Dichloro-1,1,2-trifluoroethane);
39. HCFC-151a (1 Chloro-1-fluoroethane);
40. HFE-7100 (C₄F₉OCH₃ or 1,1,1,2,2,3,3,4,4-Nonafluoro-4-methoxy-butane);
41. (CF₃)₂CFCF₂OCH₃ (2-(Difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane);
42. HFE-7200 (C₄F₉OC₂H₅ or 1-Ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane);
43. (CF₃)₂CFCF₂OC₂H₅ (2-(Ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane);
44. Methyl Acetate;
45. HFE-7000 (n-C₃F₇OCH₃ or 1,1,1,2,2,3,3,-heptafluoro-3 methoxy-propane);
46. HFE-7500 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,dodecafluoro-2-(trifluoromethyl) hexane);
47. HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane);
48. Methyl Formate (HCOOCH₃);
49. 1,1,1,2,2,3,4,5,5,5,-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE-7300);
50. propylene carbonate;
51. dimethyl carbonate;
52. HFO-1234ze (trans-1,3,3,3-tetrafluoropropene);
53. HFE-134 (HCF₂OCF₂H);

54. HFE-236cal2 (HCF₂OCF₂OCF₂H);
55. HFE-338pcc13 (HCF₂OCF₂CF₂OCF₂H);
56. H-Galden 1040x or H-Galden ZT 130 (or 150 or 180) (HCF₂OCF₂OCF₂CF₂OCF₂H);
57. *trans* 1-chloro-3,3,3-trifluoroprop-1-ene (Solstice™ 1233zd(E));
58. 2,3,3,3-tetrafluoropropene;
59. 2-amino-2-methyl-1-propanol (AMP);
60. t-butyl-acetate;
61. HFE-347pfc2 (1,1,2,2-Tetrafluoro-1-(2,2,2-trifluoroethoxy) Ethane);
62. HFO– 1336mzz–Z (*cis*-1,1,1,4,4,4-hexafluorobut-2-ene);
63. HFO–1336mzz(E) (*trans*-1,1,1,4,4,4-hexafluorobut-2-ene); and
64. Perfluorocarbon compounds which fall into these four classes:
 - (i) Cyclic, branched, or linear, completely fluorinated alkanes,
 - (ii) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
 - (iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations,
 - (iv) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

The heretofore mentioned excluded organic compounds have been determined to have negligible photochemical reactivity by the EPA Administrator. For purposes of determining compliance with emission limits under Chapter 8, VOC shall be measured by the approved test methods contained in Chapter 8. Where such a method also inadvertently measures the heretofore mentioned negligibly photochemical reactive organic compounds with the reactive organic compounds, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emission limit using EPA-approved test methods and procedures.

1.4 Air Pollution Control Program

There is hereby created within the Environmental Health Services of the Jefferson County Department of Health an Air Pollution Control Program. The Director of the Environmental Health Services shall administer these regulations and the program under the direction of the Health Officer.

1.5 Powers and Duties of the Health Officer

The Health Officer of the Jefferson County Department of Health shall have the following powers and duties:

- 1.5.1** To hold hearings relating to any aspect of or matter in the administration of these regulations and in connection therewith, compel the attendance of witnesses and the production of evidence.
- 1.5.2** To issue such orders as may be necessary to effectuate the purposes of these regulations and enforce the same by all appropriate administrative and judicial proceedings.
- 1.5.3** To require records relating to the emissions which cause or contribute to air contamination.
- 1.5.4** To secure necessary scientific, technical, administrative and operational services, including laboratory facilities, by contract or otherwise.
- 1.5.5** To prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution in Jefferson County.
- 1.5.6** To encourage voluntary cooperation by persons and affected groups to achieve the purpose of these regulations.
- 1.5.7** To encourage and conduct studies, investigations and research relating to air contamination and air pollution and their causes, effects, prevention, abatement and control.
- 1.5.8** To determine by means of field studies and sampling the degree of air contamination and air pollution in the County and the several parts thereof.
- 1.5.9** To make a continuing study of the effects of the emission of air contaminants from motor vehicles on the quality of the outdoor atmosphere of Jefferson County and the several parts thereof, and make recommendations to appropriate public and private bodies with respect thereto.
- 1.5.10** To collect and disseminate information and conduct educational and training programs relating to air contamination and air pollution.

- 1.5.11** To advise, consult, contract and cooperate with agencies of the State, local government, industries, other states, interstate or interlocal agencies, and the Federal Government, and with interested persons or groups.
- 1.5.12** To consult, upon request, with any person proposing to construct, install or otherwise acquire an air contaminant source or device or system for the control thereof, concerning the efficacy of such device or system, or the air pollution problem which may be related to the source, device or system. Nothing in any such consultation shall be construed to relieve any person from compliance with the Act, these regulations, or any other provision of law.
- 1.5.13** To accept, receive and administer grants or other funds or gifts from public and private agencies, including the Federal and State Government, for the purpose of carrying out any of the functions of these regulations.
- 1.5.14** To provide for the establishment of advisory committees, appointment of the membership of such committees, scope of investigation, and other duties, of such committees.
- 1.5.15** To require from any person reports containing information as may be required by the Health Officer concerning location, size and height of contaminant outlets, processes employed, fuels used and the nature and time periods or duration of emissions, and such other information as is relevant to air pollution.
- 1.5.16** To provide for the delegation of the authority of the Health Officer to employees of the Jefferson County Department of Health for the performance of any act or duty necessary or incidental to the administration of the Act or these regulations.
- 1.6 Availability of Records and Information.**
- 1.6.1** Public Inspection of Records. Except as is provided in this part, any records, reports or information obtained under the Act or these regulations and the official records of the Board shall be available to the public for inspection. Request to inspect such records should be made to the Director of the Environmental Health Services. Such requests should state the general subject matter of the records sought to be inspected to facilitate identification and location of the records.
- 1.6.2** Exceptions. Upon a showing satisfactory to the Health Officer by any person that records, reports, or information, or particular part thereof, (other than emission data) to which the Health Officer has access if made public, would divulge production or sales figures or methods, processes or production unique to such person, or would otherwise tend to affect adversely the competitive position of such person by revealing trade secrets, the Board and the Health Officer shall consider such records, reports, or information or particular portion thereof confidential in the administration of the Act and these rules and regulations.
- 1.6.3** Creation of Record. Records will not be created by compiling selected items from other documents at the request of a member of the public, nor will records be created to provide the requester with data such as ratios, proportions, percentages, frequency distribution, trends, correlations, or comparisons.
- 1.6.4** Denial of Request for, or Nonexistence of, Information. If it is determined pursuant to this Part that requested information will not be provided or that, to the best knowledge of the Health Officer, requested information does not exist, the Health Officer shall notify in writing the party requesting the information that the request is either denied or cannot be fulfilled.
- 1.6.5** Copies of Documents. If it is determined that information requested may be disclosed, the requesting party shall be afforded the opportunity to obtain copies of the documents containing such information. Upon request, the Health Officer may furnish said copies at a price to be set by the Health Officer that would compensate for the cost of producing the requested copies.
- 1.6.6** Disclosure of Information. Nothing herein shall be construed to prevent disclosure of such report, record or information to Federal or State representatives as necessary for purposes of administration of the Program or to any Federal or State Air Pollution Control Agency, or when relevant in any proceeding under the Act or these regulations.
- 1.6.7** Correlation of Information. As soon as practicable, the Health Officer shall provide for public availability of emission data reported by source owners or operators or otherwise obtained by the Health Officer. Such emission data shall be correlated with applicable emission limitations or other measures. As used in this section, "correlated" means presented in such a manner as to show the relationship between measured or estimated amounts of emissions allowable under these rules and regulations.
- 1.6.8** Confidential Business Information (CBI). A business which is submitting information to the Department may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to the Department, a cover sheet, stamped or typed legend, or other suitable form of notice employing

language such as *trade secret, proprietary, or company confidential*. Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by the Department. A redacted copy shall be provided to accompany the full document if individual pages contain both CBI and public information. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

- 1.6.8(a)** If no such claim accompanies the information when it is received by the Department, it may be made available to the public by the Department without further notice to the business.
- 1.6.8(b)** If the Department determines that the information claimed to be confidential is not qualified for confidential treatment, the Department may release the information to the public with notice to the business.

1.7 Ambient Air Quality Standards.

- 1.7.1** Primary and Secondary Standards. The national primary ambient air quality standards and national secondary ambient air quality standards and accompanying appendices of reference methods, set forth in 40 CFR 50, as the same may be amended or revised, are hereby incorporated and made a part of these regulations, and shall apply throughout the County.
- 1.7.2** Policy. It is the objective of the Board to obtain and maintain the ambient air quality standards of this Part in achieving the policy and purpose of the Act and as required by the Federal Act. The adoption hereby of the national primary and secondary ambient air quality standards shall not be considered in any manner to allow significant deterioration of existing air quality in any portion of the County.
- 1.7.3** Attainment of Primary Standard. These rules and regulations and the administration of the Air Pollution Control Program shall provide for the attainment of the national primary ambient air quality throughout the County as expeditiously as practicable, but in no case later than three years after the date of initial adoption of these rules and regulations or within the time limits specified by §110(a) of the Clean Air Act, as amended (91 Stat. 685), whichever is later.
- 1.7.4** Attainment of Secondary Standard. To the extent practicable and feasible, these rules and regulations and the administration of the Air Pollution Control Program shall strive for the attainment of the national secondary ambient air quality standard throughout the County concurrently with the attainment of the national primary ambient air quality standard as provided in Section 1.7.3.

1.8 Inspections.

The Health Officer or his authorized representative may enter and inspect any property, premises or place on or at which an air contaminant source is located or is being constructed, installed or established at any reasonable time for the purpose of ascertaining the state of compliance with these regulations. No person shall refuse entry or access to the Health Officer or his authorized representative who requests entry for purposes of inspection, and who presents appropriate credentials; nor shall any person obstruct, hamper or interfere with any such inspection. If requested, the owner or operator of the premises shall receive a report setting forth all facts found which relate to compliance status.

1.9 Monitoring, Records, Reporting.

- 1.9.1** The Health Officer may require the owner or operator of air contaminant source to establish and maintain such records; make such reports; install, use and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods, at such locations, intervals and procedures as the Health Officer may prescribe; and provide such periodic emission reports as required in Section 1.9.2.
- 1.9.2** Reports. Records and reports as the Health Officer may prescribe on air contaminants or fuel shall be recorded, compiled and submitted on forms furnished by the Health Officer or when forms are not so furnished, then in formats approved by the Health Officer. These may include but are not limited to any of the following:
 - 1.9.2(a)** Emissions of particulate matter, sulfur dioxide, and oxides of nitrogen shall be expressed as follows: in pounds per hour and pounds per million BTU of heat input for fuel-burning equipment; in pounds per hour and pounds per 100 pounds of refuse burned for incinerators; and in pounds per hour and in pounds per hourly process weight or production rate or in terms of some other easily measured and meaningful process unit specified by the Health Officer.

- 1.9.2(b)** Sulfur dioxide and oxides of nitrogen emission data shall be averaged over a 24-hour period and shall be summarized monthly. Daily averages and monthly summaries shall be submitted to the Health Officer biannually. Data should be calculated daily and available for inspection at any time.
- 1.9.2(c)** Particulate matter emissions shall be sampled and submitted biannually.
- 1.9.2(d)** Visible emissions shall be measured continuously and records kept indicating total minutes per day in which stack discharge effluent exceeds 20 percent opacity. Data should be summarized monthly and submitted monthly and biannually. Current daily results shall be available for inspection any time.
- 1.9.2(e)** The sulfur content of fuels, as burned, except natural gas, shall be determined in accordance with current recognized ASTM procedures. Averages for periods prescribed by the Health Officer shall be submitted biannually. Records shall be kept current and be available for inspection.

1.10 Sampling and Testing Methods.

- 1.10.1** Methods. All required sampling and testing shall be made and the results calculated in accordance with sampling and testing procedures and methods approved by the Health Officer. All required samples and tests shall be made under the direction of persons qualified by training and/or experience in the field of air pollution control.
- 1.10.2** Standard Methods. The Health Officer, to the extent practicable, should recognize and approve the test methods and procedures established by 40 CFR, as the same may be amended or revised.
- 1.10.3** The Health Officer or his authorized representative may conduct tests and take samples of air contaminants, fuel, process material or other materials which affect or may affect emission of air contaminants from any source. Upon request of the Health Officer, the person responsible for the source to be tested shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities exclusive of the instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants. If the Health Officer or his authorized representative during the course of an inspection obtains a sample of air contaminant, fuel, process material, or other material, he shall give the owner or operator of the equipment or fuel facility a receipt for the sample obtained.
- 1.10.4** Report to owner or operator. At the conclusion of any inspection under Part 1.8 of these regulations, or conduction of any testing or sampling under Part 1.10, if requested, the owner or operator of these premises shall receive a report setting forth all facts found which relate to compliance status with these rules and regulations.

1.11 Compliance Schedule.

- 1.11.1** Scope. Except as otherwise specified, compliance with the provisions of these rules and regulations shall be according to the time schedule of Part 1.11.
- 1.11.2** New Sources. All new sources shall comply with the applicable rules and regulations of Chapter 5 et seq. within 60 days after achieving the maximum production rate at which the affected source will be operated, but not later than 120 days after initial startup of such source, unless the Health Officer specifies another period of time as a condition to the issuance of any permit under Chapter 2.
- 1.11.3** Existing Sources. All existing sources not in compliance as of the date of initial adoption of an applicable rule or regulation contained in Chapter 5 et seq. shall be in compliance within 6 months of such initial date unless the owner or operator responsible for the operation of such source shall have submitted to the Health Officer in a form and manner satisfactory to him, a control plan and schedule for achieving compliance, such plan and schedule to contain a date on or before which full compliance will be attained, and such other information as the Health Officer may require. Any such plan and schedule expected to extend over a period of 18 or more months from such initial date shall include provisions for periodic increments of progress toward full compliance. If approved by the Health Officer, such dates shall be the dates on which such owner or operator shall achieve incremental progress and full compliance. In no event shall the control plan and schedule exceed 3 years from the date of initial adoption of an applicable rule or regulation. The provisions of this section shall not apply to sources for which permits are required under Chapter 2.
- 1.11.4** Nothing in this Part shall relieve any person, or any new or existing source from complying with the provisions of Chapters 1 through 4 of these rules and regulations.

1.12 Maintenance and Malfunctioning of Equipment: Reporting.

- 1.12.1** Maintenance: Reporting. In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is

accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:

- 1.12.1(a)** Identification of the specific facility to be taken out of service as well as its location and permit number.
 - 1.12.1(b)** The expected length of time that the air pollution control equipment will be out of service.
 - 1.12.1(c)** The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.
 - 1.12.1(d)** Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.
 - 1.12.1(e)** The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.
- 1.12.2** Malfunction: Reporting. In the event that any emission source, air pollution control equipment, or related facility fails or breaks down in such a manner as to cause the emission of air contaminants in violation of these rules and regulations, the person responsible for such source, equipment, or facility shall notify the Health Officer within 24 hours of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Health Officer shall be notified when the condition causing the failure or breakdown has been corrected and such source, equipment, or facility is again in operation.

1.13 Prohibition of Air Pollution.

No person shall permit or cause air pollution, as defined in Part 1.3 by the discharge of any air contaminants for which no ambient air quality standards have been set under Section 1.7.1.

1.14 Penalties.

- 1.14.1** Any person who violates any provision of these regulations or who violates any determination or order of the Health Officer pursuant to these regulations shall be liable to a penalty not to exceed \$25,000 for said violation and an additional penalty not to exceed \$25,000 for each day during which such violation continues, which penalty may be recovered by the Jefferson County Board of Health in a civil action in the Circuit Court of said county and such person may also be enjoined from continuing such violation.
- 1.14.2** Any money penalty so recovered shall be deposited in the account of the Air Pollution Program of the Jefferson County Department of Health.
- 1.14.3** It shall be the duty of the District Attorney of the Tenth Judicial Circuit to bring such actions in the Circuit Court at the request of the Jefferson County Board of Health in the name of Jefferson County, Alabama. The Jefferson County Board of Health may at its option also commence such actions utilizing attorneys employed by the Jefferson County Board of Health.
- 1.14.4** Any person who knowingly violates or fails or refuses to obey or comply with any provisions of these regulations or knowingly submits any false information required by these regulations, including knowingly making a false material statement, representation, or certification, or knowingly rendering inaccurate a monitoring device or method, upon conviction, shall be punished by a fine not to exceed ten thousand dollars (\$10,000) for the violation and an additional penalty not to exceed ten thousand dollars (\$10,000) for each day thereafter during which the violation continues and may also be sentenced to hard labor for the county for not more than one year.
- 1.14.5** Reserved.
- 1.14.6** Reserved.
- 1.14.7** The testimony taken at any hearing before the Jefferson County Board of Health shall be under oath and may be recorded stenographically, but the parties shall not be bound by the strict rules of evidence prevailing in the courts of law and equity. True copies of any transcript or of any other record made of or at such hearing shall be furnished to any party thereto upon request and on payment of the reasonable cost of making such transcript.

1.15 Circumvention.

No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminants which would otherwise violate these rules and regulations.

1.16 Severability.

The provisions of these rules and regulations and the various applications thereof are declared to be severable and if any chapter, part, section, paragraph, subparagraph, subdivision, clause, or phase of these rules and regulations shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair or invalidate the remainder of these rules and regulations, but shall be confined in its operation to the chapter, part, section, paragraph, subparagraph, subdivision, clause, or phase of these rules and regulations that shall be directly involved in the controversy in which such judgment shall have been rendered.

1.17 Bubble Provision.

1.17.1 Notwithstanding the specific emission limitations contained in Chapters 5, 6, 7 and 9 the Health Officer may allow a facility to reduce the level of control required at one source in exchange for an equal increase in the level of control required at another source. Approval of any such exchange shall not be granted unless it is consistent with the requirements of Federal and State Law.

1.17.2 Any such approval granted will not be effective until it becomes a part of the approved State Implementation Plan.

1.18 Credible Evidence.

1.18.1 Compliance Certification. Notwithstanding any other provision in the Jefferson County Board of Health Air Pollution Control Rules and Regulations, an owner or operator may use any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, for the purpose of submitting compliance certifications.

1.18.2 Notwithstanding any other provision in the Jefferson County Board of Health Air Pollution Control Rules and Regulations, any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or a not an owner or operator has violated or is in violation of any rule or standard in these Regulations.

1.19 Reserved.

1.20 Emissions Inventory Reporting Requirements for Consolidated Emissions Reporting Rule.

1.20.1 General. The requirements of this Rule serve to establish reporting requirements from point sources in order to meet the statewide emissions inventory reporting requirements under 40 CFR 51, Appendix A, as required by §§110(p) and 110(a)(2)(F)(ii) of the Clean Air Act, as amended.

1.20.2 Definitions. For the purpose of this Rule, the definitions in 40 CFR 51, Appendix A shall apply unless defined under this paragraph.

1.20.2(a) Point Source" means:

1.20.2(a)(1) A plant or facility which has one or more non-mobile or stationary sources;

1.20.2(a)(2) "Type A source" means large point sources with actual annual emissions greater than or equal to any of the emissions thresholds listed in Subdivisions 1.20.2(a)(2)(i) through (vii) below.

1.20.2(a)(2)(i) ≥ 2,500 TPY Sulfur oxides.

1.20.2(a)(2)(ii) ≥ 250 TPY VOC.

1.20.2(a)(2)(iii) ≥ 2,500 TPY NO_x.

1.20.2(a)(2)(iv) ≥ 2,500 TPY CO.

1.20.2(a)(2)(v) ≥ 250 TPY PM₁₀.

1.20.2(a)(2)(vi) ≥ 250 TPY PM_{2.5}.

1.20.2(a)(2)(vii) ≥ 250 TPY NH₃.

1.20.2(a)(3) "Type B source" means any point source with potential annual emissions greater than or equal to any of the emissions thresholds listed in Subdivisions 1.20.2(a)(3)(i) through (a)(3)(viii) below.

- 1.20.2(a)(3)(i)** ≥ 100 TPY Sulfur oxides.
- 1.20.2(a)(3)(ii)** ≥ 100 TPY VOC.
- 1.20.2(a)(3)(iii)** ≥ 100 TPY NO_x.
- 1.20.2(a)(3)(iv)** ≥ 1,000 TPY CO. If the source is located in an ozone nonattainment area, then the threshold is ≥ 100 TPY.
- 1.20.2(a)(3)(v)** ≥ 5 TPY Lead.
- 1.20.2(a)(3)(vi)** ≥ 100 TPY PM₁₀.
- 1.20.2(a)(3)(vii)** ≥ 100 TPY PM_{2.5}.
- 1.20.2(a)(3)(viii)** ≥ 100 TPY NH₃.
- 1.20.2(b)** "Potential to Emit" shall have the same meaning ascribed in Chapters 2 and 18 of these Regulations.
- 1.20.3** Applicability. This Rule applies to all owners or operators of point sources in Jefferson County.
- 1.20.4** Reporting requirements.
 - 1.20.4(a)** The owner or operator of a point source shall submit emissions inventory data as follows:
 - 1.20.4(a)(1)** Annual reporting. Beginning with emissions year 2002 and every year thereafter, for each owner or operator of a Type A source, the data specified in 40 CFR 51, Appendix A, Table 2A must be submitted to the Department by June 1 of the calendar year following the emissions year being reported.
 - 1.20.4(a)(2)** Triennial reporting. For each owner or operator of a Type B source, beginning with emissions year 2002 and every third year thereafter, the data specified in 40 CFR 51, Appendix A, Table 2A must be submitted to the Department by June 1 of the calendar year following the emissions year being reported.
 - 1.20.4(b)** The data required under paragraph 1.20.4(a) shall be submitted electronically to the Department in a format approved by the Department.
- 1.21** Reserved.

CHAPTER 2 - AIR PERMITS

(Adopted January 28, 1972. Revised April 10, 1985; January 8, 1986; January 14, 1987; February 8, 1989; October 10, 1990; December 11, 1991; October 14, 1992; December 8, 1993; January 10, 1996; March 11, 1998; July 14, 1999; June 14, 2000; November 8, 2000; May 2, 2001; May 8, 2002; March 14, 2007; and June 13, 2007; September 14, 2011; November 14, 2012; May 8, 2013; May 11, 2016; and August 14, 2024.)

2.1 General Provisions.

2.1.1 Air Permit.

- 2.1.1(a)** Any person building, erecting, altering, or replacing any article, machine, equipment, or other contrivance, the use of which may cause the issuance of or an increase in the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants, shall submit an application for an Air Permit at least 10 days prior to construction.
- 2.1.1(b)** Before any article, machine, equipment or other contrivance described in paragraph 2.1.1(a) may be operated or used, authorization shall be obtained from the Health Officer in the form of an Air Permit. No permit shall be granted for any article, machine, equipment or contrivance described in paragraph 2.1.1(a), constructed or installed without notification as required by paragraph 2.1.1(a), until the information required is presented to the Health Officer and such article, machine, equipment or contrivance is altered, if necessary, and made to conform to the standards established by the Board of Health.
- 2.1.1(c)** Any article, machine, equipment or other contrivance described in paragraph 2.1.1(a) which is presently operating (or which is not presently operating but which is capable of being operated) without an Air Permit may continue to operate (or may restart) only if its owner or operator obtains an Air Permit prior to a date to be set by the Health Officer (or prior to restarting).
- 2.1.1(d)** Display of Air Permit. A person who has been granted an Air Permit for any article, machine, equipment, or other contrivance shall keep such Permit under file or on display at all times at the site where the article, machine, equipment, or other contrivance is located and will make such a permit readily available for inspection by any and all persons who may request to see it.
- 2.1.1(e)** The Health Officer shall have the authority to decide cases where an article, machine, equipment, or other contrivance is not clearly subject to nor exempt from the application of this Part. In addition, the Health Officer may rule that a particular article, machine, equipment, or other contrivance is subject to the application of this Part even though it is exempt from the system according to paragraph 2.1.1(a) and section 2.1.5. The operator or builder of such an article, a machine, equipment, or other contrivance may appeal the Health Officer's classification to the Board of Health, which shall overrule the Health Officer only if it is shown that he acted arbitrarily and contrary to the purposes of the Act and these regulations.
- 2.1.1(f)** Upon completion of construction by a new facility, the Health Officer shall, within a reasonable period of time, dispatch an inspector to the facility in question. If the inspector determines that the facility has been constructed according to the specifications as set forth under the Air Permit or that any changes to the facility would reduce or affect to an unsubstantial degree that quantity of air contaminants emitted by the facility, and if the Health Officer agrees with this conclusion, then the Health Officer shall authorize initial operation of the facility until an official inspection of the facility under actual operating conditions can be made and the results reviewed or until the Air Permit is suspended or revoked by the Health Officer. The Health Officer may authorize initial operation of the facility without an inspection if upon completion of the construction, an owner or operator familiar with the application for an Air Permit submits a letter to the Health Officer, testifying that the construction under application has been completed and is in accordance with the specifications as set down in the Air Permit. The Health Officer is empowered to reject that testimony if the Health Officer decides that the owner or operator's qualifications are insufficient to allow him to accurately and completely assess the equipment in question. An owner or operator may appeal any such judgment to the Board of Health.
- 2.1.1(g)** The Health Officer may issue an Air Permit subject to conditions which will bring the operation of any article, machine, equipment or other contrivance within the standards of Section 2.3.1 in which case the conditions shall be specified in writing. Commencing construction or operation under such an Air Permit shall be deemed acceptance of all the conditions specified. The Health Officer shall issue an Air Permit with revised conditions upon receipt of a new application, if the applicant demonstrates that the article, machine, equipment, or other contrivance can operate within the standards of Section 2.3.1 under the revised conditions.

2.1.1(h) Reserved.

2.1.1(i) Reserved.

2.1.1(j) Reserved.

2.1.1(k) Precedence of Permitting Requirements

For a facility that holds or has applied for a Synthetic Minor Operating Permit issued under Chapter 17 or an Operating Permit issued under Chapter 18, the permitting requirements under Chapter 17 or 18 will supersede the permitting requirements of Parts 2.1, 2.2 and 2.3 where Chapter 17 or 18 contains provisions covering the same subject matter.

2.1.1(l) Merged New Source Review and Permitting Program

2.1.1(l)(1) Any Air Permit issued by the Department shall authorize both construction and operation of the equipment covered by the permit. This includes minor source permits issued under Chapter 2, Synthetic Minor Operating Permits issued under Chapter 17, and Major Source Operating Permits issued under Chapter 18.

2.1.1(l)(2) For a new major source or a modification at an existing major source, new source review under the requirements of Part 2.4 and/or Part 2.5 shall be merged with the permitting process and requirements of Chapter 18, accomplishing new source review at the same time as a Title V initial or renewal permit.

2.1.1(l)(3) For a major source of HAP required to obtain a source specific MACT determination under Part 2.6, the requirements of Part 2.6 shall be merged with the permitting process and requirements of Chapter 18, establishing requirements for control technology at the same time as a Title V initial or renewal permit.

2.1.1(l)(4) An individual Air Permit to commemorate requirements established pursuant to new source review, source specific MACT determination and/or a consent decree may be issued provided that the underlying requirements have been subject to a 30-day (or longer) public comment period consistent with Chapter 2, 17 or 18 or as noticed by the Environment and Natural Resources Division, U.S. Department of Justice and entered in federal district court.

2.1.2 Provision of Sampling and Testing Facilities. A person operating or using any article, machine, equipment or other contrivance for which these rules and regulations require a permit shall provide and maintain such sampling and testing facilities as specified in the Air Permit.

2.1.3 The holder of a Permit under this Part shall comply with conditions contained in such Permit as well as all applicable provisions of these rules and regulations.

2.1.4 Transfer. An Air Permit shall not be transferable whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another.

2.1.5 Exemptions. From time to time the Health Officer may specify certain classes or sizes of articles, machines, equipment, or other contrivances which would normally be subject to the requirement to apply for an Air Permit as being exempt from the requirement to apply for such permits. Exempt sources are subject in every other way to these rules and regulations.

2.1.6 Air Permit Requirements to Alabama Department of Environmental Management.

2.1.6(a) The Health Officer shall provide the Director of Alabama Department of Environmental Management with the opportunity to review all Air Permit Applications, the analysis of the Air Permits, and Proposed Air Permit Conditions at least ten days prior to date of issuance of an Air Permit; except certain classes of Air Permits, as agreed upon between the Health Officer and the Director of Alabama Department of Environmental Management may be exempt from the ten day period, provided files are maintained on all permits exempted from review by the Alabama Department of Environmental Management.

2.1.6(b) The Jefferson County Department of Health (Air Pollution Control Program) shall provide the Director of Alabama Department of Environmental Management a copy of preliminary determinations and public comment notices for all Air Permits issued pursuant to Parts 2.4 and 2.5 of this Chapter at the same time the notice is forwarded for publication in the newspaper.

2.1.7 Public Participation

2.1.7(a) Notice shall be given by publication in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice and also to persons on a mailing list developed by the

Department for persons desiring notice of permit action, including persons who have requested in writing to be on such a list, under the following circumstances:

- 2.1.7(a)(1)** Construction at a Greenfield Site.
- 2.1.7(a)(1)(i)** For the purposes of this paragraph, a "Greenfield Site" shall mean a new development or the initial operation of a new facility.
- 2.1.7(a)(2)** The Health Officer, at his/her discretion, may require Public Notification for any application received in accordance with paragraph 2.1.1(a).
- 2.1.7(b)** Public comments will be received by the Department for a period of 30 days following the publication of the public notice. (Revised 8/14/2024.)
- 2.1.7(c)** Public Notice will be held in accordance with the requirements of Parts 2.4, 2.5 or 2.6 for any application which is subject to the requirements of Parts 2.4, 2.5 or 2.6.
- 2.1.7(d)** Construction of any article, machine, equipment, or other contrivance as described in 2.1.1(a) shall not commence until after an Air Permit is issued if a public notice is required under 2.1.7.

2.2 Permit Procedure.

- 2.2.1(a)** Applications. Every application for an Air Permit required under Section 2.1.1 shall be filed in the manner and form prescribed by the Health Officer and shall give all the information necessary to enable the Health Officer to make the determination required by Part 2.3.
 - 2.2.1(a)(1)** Permit applications shall be submitted on paper with a "wet-ink" signature on each form.
 - 2.2.1(a)(2)** The signed paper application shall be accompanied by an electronic copy of permit applications, that may be a scan of the paper original or a PDF generated by the program in which the document was created.
 - 2.2.1(a)(3)** If any information is claimed to be confidential business information, this claim shall be asserted according to 1.6.8 and an additional electronic copy with claimed CBI redacted shall be submitted alongside the paper and unredacted electronic copy.
- 2.2.1(b)** Cancellation of Applications. An Air Permit authorizing construction shall expire and the application shall be canceled two years from the date of issuance of the Air Permit if the construction has not begun.
- 2.2.2** Action on Application. The Health Officer shall act, within a reasonable time, on an application for an Air Permit and shall notify the applicant in writing of its approval, conditional approval or denial.
- 2.2.3** Denial of Application. In the event of denial of an Air Permit, the Health Officer shall notify the applicant in writing of the reason therefore. Service of this notification may be made in person or by mail, and such service may be proved by the written acknowledgement of the persons served or affidavit of the person making the service. The Health Officer shall not accept a further application unless the applicant has complied with the objections specified by the Health Officer as its reasons for denial of the Air Permit.
- 2.2.4** Revocation of Air Permits. Any Air Permit granted by the Health Officer may be revoked for any of the following causes:
 - 2.2.4(a)** failure to comply with any conditions of the permit;
 - 2.2.4(b)** failure to notify the Health Officer prior to intended use or operation of any article, machine, equipment, or other contrivance described in paragraph 2.1.1(a);
 - 2.2.4(c)** failure to establish and maintain such records, make such reports, install, use and maintain such monitoring equipment or methods; and sample such emissions in accordance with such methods at such locations, intervals and procedures as the Health Officer may prescribe in accordance with Part 1.9;
 - 2.2.4(d)** failure to comply with any provisions of any Board of Health administrative order issued concerning the permitted source or facility;
 - 2.2.4(e)** failure to allow entry of employees of the Jefferson County Department of Health upon proper identification:
 - 2.2.4(e)(1)** to enter any premises where any article, machine, equipment, or other contrivance described in paragraph 2.1.1(a) is located or in which any records are required to be kept under provisions of the permit and/or the rules and regulations;

- 2.2.4(e)(2)** to have access to and copy any records required to be kept under provisions of the permit and/or the rules and regulations;
- 2.2.4(e)(3)** to inspect any monitoring equipment or practices being maintained pursuant to the permit and/or rules and regulations; and
- 2.2.4(e)(4)** to have access to and sample any discharge of air contaminants resulting directly or indirectly from the operation of any article, machine, equipment, or other contrivance described in paragraph 2.1.1(a).
- 2.2.4(f)** failure to comply with the rules and regulations of the Board of Health.
- 2.2.4(g)** for any other cause, after a hearing which establishes, in the judgment of the Board of Health, that continuance of the permit is not consistent with the purpose of this Act the Alabama Air Pollution Control Act or regulations under it.
- 2.2.4(h)** failure to pay any fees required by the Regulations or the Jefferson County Department of Health Environmental Health Services Fee Manual.
- 2.2.5** Expiration of Air Permits. Air Permits shall expire immediately following:
 - 2.2.5(a)** the issuance of a Synthetic Minor Operating Permit required by Chapter 17 or an Operating Permit required by Chapter 18 which pertains to the article, machine, equipment, or other contrivance regulated by the Air Permit.
 - 2.2.5(b)** the final denial of a Synthetic Minor Operating Permit required by Chapter 17 or an Operating Permit required by Chapter 18 which pertains to the article, machine, equipment or other contrivance regulated by the Air Permit.
 - 2.2.5(c)** the failure of a facility to apply for a Synthetic Minor Operating Permit or modification to an existing Synthetic Minor Operating Permit as required by Chapter 17 or the failure of a facility to apply for an Operating Permit or modification to an existing Operating Permit as required by Chapter 18.

2.3 Standards for Granting Permits.

2.3.1 General Standards.

- 2.3.1(a)** The Health Officer shall deny a permit if the applicant does not show that every article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment, that it may be expected to operate without emitting or without causing to be emitted air contaminants in violation of these rules and regulations.
- 2.3.1(b)** The Health Officer shall deny a permit if the applicant does not present, in writing, a plan whereby the emission of air contaminants by every article, machine, equipment, or other contrivance described in the permit application, will be reduced during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency in accordance with the provisions of Chapter 4 where such a plan is required.
- 2.3.1(c)** Before an Air Permit is granted, the Health Officer may require the applicant to provide and maintain such facilities as are necessary for sampling and testing purposes in order to secure information that will disclose the nature, extent, quantity or degree of air contaminants discharged into the atmosphere from the article, machine, equipment, or other contrivance described in the Air Permit. In the event of such a requirement, the Health Officer shall notify the applicant in writing of the required size, number, and location of the sampling platform; the access to the sampling platform; and the utilities for operating and sampling and testing equipment.
- 2.3.1(d)** The Health Officer may also require the applicant to install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods, at such locations, intervals, and procedures as may be specified; and provide such information as the Health Officer may require.
- 2.3.1(e)** Before acting on an application for an Air Permit, the Health Officer may require the applicant to furnish further information or further plans or specifications.
- 2.3.1(f)** If the Health Officer finds that the article, machine, equipment, or other contrivance has been constructed not in accordance with the Air Permit, and if the changes noted are of a substantial nature in that the amount of air contaminants emitted by the article, machine, equipment, or other contrivance may be increased, or in that the effect is unknown, then he shall revoke the Air Permit. The Health Officer shall not accept any further application for an Air Permit until the article, machine, equipment or other contrivance has been reconstructed in accordance with the said Air Permit or until the applicant has proven to the satisfaction of the Health Officer that the change will not cause an increase in the emission of air contaminants.

2.3.1(g) The Health Officer shall deny an Air Permit where he determines that the construction and operation of such source will interfere with attaining or maintaining any primary or secondary standard established by Section 1.7.1. A new source or modification will be considered to interfere with attaining or maintaining a standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not meet the NAAQS:

Pollutant	Averaging Time				
	Annual	24 hours	8 hours	3 hours	1 hour
SO ₂	1.0 µg/m ³	5 µg/m ³		25 µg/m ³	
PM ₁₀	1.0 µg/m ³	5 µg/m ³			
PM _{2.5}	0.3 µg/m ³	1.2 µg/m ³			
NO ₂	1.0 µg/m ³				
CO			0.5 mg/m ³		2 mg/m ³

2.3.1(g)(1) A proposed major source or major modification subject to paragraph 2.3.1(g) may reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where this impact would otherwise cause or contribute to a violation of any national ambient air quality standard or exceed the significance levels of subparagraph 2.3.1(g) above. In the absence of such emission reductions, the Health Officer shall deny the proposed construction.

2.3.1(g)(2) The requirements of paragraph 2.3.1(g) shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment pursuant to §107 of the federal Clean Air Act.

2.3.1(h) Reserved. (Removed, effective August 14, 2024.)

2.3.1(i) A determination may be made by the Health Officer to deny a permit application if the applicant operates other permitted facilities or sources within Jefferson County which are in substantial noncompliance as determined by the Health Officer, until such noncompliance is corrected or if the Health Officer determines that a permit that results in compliance with applicable air pollution control standards could not be issued, or if issued, could not be complied with.

2.3.2 Reserved.

2.3.3 Reserved.

2.3.4 Stack Heights

2.3.4(a) Definitions. For purposes of this section, the following words and phrases, unless a different meaning is plainly required by the context, shall have the following meanings:

2.3.4(a)(1) "Emission limitation" and "emission standard" mean a requirement, established by Jefferson County Board of Health or the EPA Administrator, which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

2.3.4(a)(2) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

2.3.4(a)(3) "A stack in existence" means that the owner or operator had (1) begun, or caused to begin, a continuous program of physical on-site construction of the stack or, (2) entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

2.3.4(a)(4) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

2.3.4(a)(4)(i) Using that portion of a stack which exceeds good engineering practice stack height;

- 2.3.4(a)(4)(ii)** Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or
- 2.3.4(a)(4)(iii)** Increasing final exhaust gas plume rise by manipulating source-process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.
- 2.3.4(a)(4)(iv)** The preceding sentence does not include:
- 2.3.4(a)(4)(iv)(A)** The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream:
- 2.3.4(a)(4)(iv)(B)** The merging of exhaust gas streams where:
- 2.3.4(a)(4)(iv)(B)(I)** The source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;
- 2.3.4(a)(4)(iv)(B)(II)** After July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or
- 2.3.4(a)(4)(iv)(B)(III)** Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the Health Officer shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the Health Officer shall deny credit for the effects of such merging in calculating the allowable emissions for the source:
- 2.3.4(a)(4)(iv)(C)** Smoke management in agricultural or silvicultural prescribed burning programs;
- 2.3.4(a)(4)(iv)(D)** Episodic restrictions on residential woodburning and open burning; or
- 2.3.4(a)(4)(iv)(E)** Techniques under subdivision 2.3.4 (a)(4)(iii) which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.
- 2.3.4(a)(5)** "Good engineering practice" (GEP) stack height means the greater of:
- 2.3.4(a)(5)(i)** 65 meters measured from the ground-level elevation at the base of the stack;
- 2.3.4(a)(5)(ii)**
- 2.3.4(a)(5)(ii)(A)** For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR Parts 51 and 52 provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

$$H_g = 2.5H$$

- 2.3.4(a)(5)(ii)(B)** 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 Health Officer may require the use of a field study or fluid model to verify GEP stack height for the source; or

- 2.3.4(a)(5)(iii)** The height demonstrated by a fluid model or a field study approved by the Health Officer, 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.
- 2.3.4(a)(6)** "Nearby" as used in subparagraph 2.3.4(a)(5) is defined for a specific structure or terrain feature and
- 2.3.4(a)(6)(i)** For purposes of applying the formulae provided in subdivision 2.3.4(a)(5)(ii) means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile), and
- 2.3.4(a)(6)(ii)** For conducting demonstrations under subdivision 2.3.4(a)(5)(iii) means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (ht) of the feature, not to exceed 2 miles if such feature achieves a height (ht) 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formulae provided in clause 2.3.4(a)(5)(ii)(B) or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of stack.
- 2.3.4(a)(7)** "Excessive concentration" is defined for the purpose of determining GEP stack height under subdivision 2.3.4(a)(5)(iii) and means:
- 2.3.4(a)(7)(i)** For sources seeking credit for stack height exceeding that established under subdivision 2.3.4(a)(5)(ii), a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than a NAAQS. For sources subject to the PSD program (Part 2.4), an excessive concentration alternatively means a maximum ground level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emissions rate to be used in making demonstrations under this part shall be prescribed by the New Source Performance Standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Health Officer, an alternative emission rate shall be established in consultation with the source owner or operator;
- 2.3.4(a)(7)(ii)** For sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under subdivision 2.3.4(a)(5)(ii), either:
- 2.3.4(a)(7)(ii)(A)** A maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in subdivision 2.3.4(a)(7)(i), except that the emission rate specified elsewhere in these regulations (or, in the absence of such a limit, the actual emission rate) shall be used, or
- 2.3.4(a)(7)(ii)(B)** The actual presence of a local nuisance caused by the existing stack, as determined by the Health Officer; and
- 2.3.4(a)(7)(iii)** For sources seeking credit after January 12, 1979, for a stack height determined under subdivision 2.3.4(a)(5)(ii) where the Health Officer requires that use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in subdivision 2.3.4(a)(5)(ii), a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.
- 2.3.4(b)** Before acting on any Air Permit, the Health Officer shall require that the degree of emission limitation required of any source for control of any air pollutant shall not be affected by so much of any source's stack height that exceeds GEP or by any other dispersion technique, except as provided in paragraph 2.3.4(c).
- 2.3.4(c)** The provisions of paragraph 2.3.4(b) shall not apply to stack heights in existence, or dispersion techniques implemented, prior to December 31, 1970, except where pollutants are being emitted from such stacks or using

such dispersion techniques by sources, as defined in §111 (a)(3) of the Clean Air Act, which were constructed, or reconstructed or for which major modifications, as defined pursuant to paragraphs 2.4.2(b) and 2.5.2(b) were carried out after December 31, 1970.

- 2.3.4(d)** If any existing sources, after appropriate application of the preceding limitations and provisions, are found to exceed or potentially exceed a NAAQS or PSD increment, when operating within previously established emission limitations, the emissions limitations applicable to that source shall be modified so as to eliminate and prevent the exceedance.
- 2.3.4(e)** If any new source or source modifications, after appropriate application of the preceding limitations and provisions, are predicted to exceed a NAAQS or PSD increment when evaluated under emission limitations consistent with other applicable rules and regulations, the emission limitations considered shall be deemed inadequate and different emission limits, based on air quality considerations, shall be made applicable.
- 2.3.4(f)** If any source provides a field study or fluid modeling demonstration proposing a GEP stack height greater than that allowed by subdivisions 2.3.4(a)(5)(i) and (ii), then the public will be notified of the availability of the study and provided the opportunity for a public hearing before any new or revised emission limitation or permit is approved.
- 2.3.4(g)** The actual stack height used or proposed by a source shall not be restricted in any manner by requirements of this section.

2.4 Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration Permitting (PSD))

2.4.1 Applicability

- 2.4.1(a)** The requirements of Part 2.4 apply to the construction of any new major stationary source (as defined in paragraph 2.4.2(a)) or any project at an existing major stationary source in an area designated as attainment or unclassifiable under §§107(d)(1)(A)(ii) or (iii) of the Clean Air Act.
- 2.4.1(b)** The requirements of Sections 2.4.9 through 2.4.17 apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as Part 2.4 otherwise provides.
- 2.4.1(c)** No new major stationary source or major modification to which the requirements of Sections 2.4.9 through 2.4.17 apply shall begin construction without a permit that states that the major stationary source or major modification will meet those requirements.
- 2.4.1(d)** Except as otherwise provided in paragraph 2.4.1(j), and consistent with the definition of major modification contained in paragraph 2.4.2(b), a project is a major modification for a regulated NSR pollutant only if it causes two types of emissions increases – a significant emissions increase (as defined in paragraph 2.4.2(mm)), and a significant net emissions increase (as defined in paragraphs 2.4.2(c) and 2.4.2(w)).
- 2.4.1(e)** Before beginning actual construction, the procedure for calculating whether a significant emissions increase will occur depends upon the type of emissions units being modified, according to paragraphs 2.4.1(f) through (i). The procedure for calculating whether a significant net emissions increase will occur at the major stationary source is contained in the definition in paragraph 2.4.2(c). Regardless of any such preconstruction projections, a major modification can result only if the project causes a significant emissions increase and a significant net emissions increase.
- 2.4.1(f)** Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference(s) between the projected actual emissions (as defined in paragraph 2.4.2(nn)) and the baseline actual emissions (as defined in subparagraphs 2.4.2(uu)(1) and 2.4.2(uu)(2)), for each existing emissions unit, equals or exceeds the significant rate for that pollutant (as defined in paragraph 2.4.2(w)).
- 2.4.1(g)** Actual-to-potential test for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph 2.4.2(d)) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in subparagraph 2.4.2(uu)(3)) of these units before the project equals or exceeds the significant rate for that pollutant (as defined in paragraph 2.4.2(w)).
- 2.4.1(h)** Actual-to-potential test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference(s) between the potential to emit (as defined in Paragraph 2.4.2(d) of this Rule) and the actual emissions (as defined in Paragraph 2.4.2 (u) of this Rule), for each existing emissions unit, equals or exceeds the significant rate for that pollutant (as defined in Paragraph 2.4.2(w) of this Rule).

- 2.4.1(i)** Hybrid test for projects that involve multiple types of emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in Paragraphs 2.4.1(f) through (h) as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant rate for that pollutant (as defined in Paragraph 2.4.2(w)).
- 2.4.1(j)** Any major stationary source subject to a plantwide applicability limit (PAL), as defined in subparagraph 2.4.23(b)(5), for a regulated NSR pollutant shall comply with the requirements under Section 2.4.23.
- 2.4.1(k)** Greenhouse gases (GHGs)
- 2.4.1(k)(1)** GHGs, as defined in Paragraph 2.4.2(zz), shall not be utilized in determining if a source is a major stationary source, as defined in Paragraph 2.4.2(a), or in determining if a modification is a major modification, as defined in Paragraph 2.4.2(b).
- 2.4.1(k)(2)** GHGs shall only be subject to the requirements of Part 2.4 if:
- 2.4.1(k)(2)(i)** A new major stationary source or major modification causes a significant emission increase of GHGs, as defined in Paragraph 2.4.2(mm), and a significant net emission increase of GHGs, as defined in Paragraphs 2.4.2(c) and 2.4.2(w); and
- 2.4.1(k)(2)(ii)** The new major stationary source or major modification is required to obtain a permit subject to the requirements of Part 2.4 as a result of emissions of regulated NSR pollutants other than GHGs.
- 2.4.1(k)(3)** Reserved.
- 2.4.1(l)** The “sum of the difference” as used in 2.4.1(f), 2.4.1(g) and 2.4.1(i) shall include both increases and decreases in emissions calculated in accordance with those paragraphs.
- 2.4.2** Definitions. For the purposes of Part 2.4 only, the following terms will have meanings ascribed in this section“
- 2.4.2(a)(1)** "Major Stationary Source" shall mean:
- 2.4.2(a)(1)(i)** Any of the following stationary sources (see Paragraph 2.4.2 (e)) of regulated NSR air pollutants which emits, or has the potential to emit (see paragraph 2.4.2 (d)), 100 tons per year or more of any regulated NSR pollutant:
- 2.4.2(a)(1)(i)(A)** carbon black plants (furnace process);
- 2.4.2(a)(1)(i)(B)** charcoal production plants;
- 2.4.2(a)(1)(i)(C)** chemical process plants;
- 2.4.2(a)(1)(i)(D)** coal cleaning plants (with thermal dryers);
- 2.4.2(a)(1)(i)(E)** coke oven batteries;
- 2.4.2(a)(1)(i)(F)** fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input;
- 2.4.2(a)(1)(i)(G)** fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
- 2.4.2(a)(1)(i)(H)** fuel conversion plants;
- 2.4.2(a)(1)(i)(I)** glass fiber processing plants;
- 2.4.2(a)(1)(i)(J)** hydrofluoric acid plants;
- 2.4.2(a)(1)(i)(K)** sulfuric acid plants;
- 2.4.2(a)(1)(i)(L)** nitric acid plants;
- 2.4.2(a)(1)(i)(M)** iron and steel mill plants;
- 2.4.2(a)(1)(i)(N)** kraft pulp mills;
- 2.4.2(a)(1)(i)(O)** lime plants;
- 2.4.2(a)(1)(i)(P)** municipal incinerators capable of charging more than 250 tons of refuse per day;

- 2.4.2(a)(1)(i)(Q)** petroleum refineries;
- 2.4.2(a)(1)(i)(R)** petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- 2.4.2(a)(1)(i)(S)** phosphate rock processing plants;
- 2.4.2(a)(1)(i)(T)** Portland and cement plants;
- 2.4.2(a)(1)(i)(U)** primary aluminum ore reduction plants;
- 2.4.2(a)(1)(i)(V)** primary copper smelters;
- 2.4.2(a)(1)(i)(W)** primary lead smelters;
- 2.4.2(a)(1)(i)(X)** primary zinc smelters;
- 2.4.2(a)(1)(i)(Y)** secondary metal production plants;
- 2.4.2(a)(1)(i)(Z)** sintering plants;
- 2.4.2(a)(1)(i)(AA)** sulfur recovery plants;
- 2.4.2(a)(1)(i)(BB)** taconite ore processing plants;
- 2.4.2(a)(1)(ii)** Notwithstanding the stationary source size specified in subdivision 2.4.2(a)(1)(i), any stationary source which emits or has the potential to emit, 250 tons per year or more of any regulated NSR pollutant; or
- 2.4.2(a)(1)(iii)** Any physical change that would occur at a stationary source not otherwise qualifying under paragraph 2.4.2(a) as a major stationary source, if the change would constitute a major stationary source by itself.
- 2.4.2(a)(2)** A stationary source that is considered major for volatile organic compounds (VOC) or Nitrogen Oxide (NO_x) shall be considered major for ozone.
- 2.4.2(b)** "Major Modification" shall mean any physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase (see paragraph 2.4.2(w)) of a regulated NSR pollutant; and a significant net emissions increase (see paragraph 2.4.2 (c)) of any regulated NSR pollutant from the major stationary source.
- 2.4.2(b)(1)** Any net emissions increase that is significant for VOC or NO_x shall be considered significant for ozone.
- 2.4.2(b)(2)** Any net emissions increase that is significant for SO₂ or NO_x shall be considered significant for PM_{2.5}.
- 2.4.2(b)(3)** A physical change or change in the method of operation shall not include:
 - 2.4.2(b)(3)(i)** Routine maintenance, repair, and replacement;
 - 2.4.2(b)(3)(ii)** Use of an alternative fuel or raw material by reason of an order under §§2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (P.L. 93-319, 15 U.S.C. 791 note) or any superseding legislation, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act (June 10, 1920, P.L. 280, 16 U.S.C. 791a);
 - 2.4.2(b)(3)(iii)** Use of an alternative fuel by reason of an order or rule under §125 of the CAA;
 - 2.4.2(b)(3)(iv)** Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
 - 2.4.2(b)(3)(v)** Use of an alternative fuel or raw material by a stationary source which:
 - 2.4.2(b)(3)(v)(A)** The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any enforceable permit condition which was established after January 6, 1975; or
 - 2.4.2(b)(3)(v)(B)** The source is approved to use under any permit issued under the Federal Prevention of Significant Deterioration ("PSD") regulations (40 CFR 52.21) or under regulations of Part 2.4;
 - 2.4.2(b)(3)(vi)** An increase in the hours of operation or in the production rate, unless such change would be prohibited under any enforceable permit condition which was established after January 6, 1975.
 - 2.4.2(b)(3)(vii)** Any change in ownership at a stationary source.

- 2.4.2(b)(3)(viii)** Reserved.
- 2.4.2(b)(3)(ix)** The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- 2.4.2(b)(3)(x)** The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated NSR pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.
- 2.4.2(b)(4)** This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under Section 2.4.23 for a PAL for that pollutant. Instead, the definition at subparagraph 2.4.23(b)(8) shall apply.
- 2.4.2(c)** "Net Emissions Increase" shall mean with the respect to any regulated NSR pollutant, the amount by which the sum of the following exceeds zero:
- 2.4.2(c)(1)** Any increase in emissions as calculated pursuant to Paragraphs 2.4.1(e) through (i) from a particular physical change or change in method of operation at a stationary source; and
- 2.4.2(c)(2)** Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph shall be determined as provided in paragraph 2.4.2(uu), except that subdivisions 2.4.2(uu)(1)(iii) and 2.4.2(uu)(2)(iv) shall not apply.
- 2.4.2(c)(2)(i)** An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
- 2.4.2(c)(2)(i)(A)** The date five years before construction (see paragraph 2.4.2(h)) on the particular change commences (see paragraph 2.4.2(i)); and
- 2.4.2(c)(2)(i)(B)** The date that the increase from the particular change occurs.
- 2.4.2(c)(2)(ii)** An increase or decrease in actual emissions is creditable only if the Health Officer has not relied on it in issuing a permit for the source under Part 2.4, which is in effect when the increase in actual emissions from the particular change occurs.
- 2.4.2(c)(2)(iii)** An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides which occurs before the applicable minor source baseline date (see paragraph 2.4.2(n)(1)) is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available. With respect to particulate matter, only PM₁₀ and PM_{2.5} emissions can be used to evaluate the net emissions increase for PM₁₀. Only PM_{2.5} emissions can be used to evaluate the net emissions increase for PM_{2.5}.
- 2.4.2(c)(2)(iv)** An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- 2.4.2(c)(2)(v)** A decrease in actual emissions is creditable only to the extent that:
- 2.4.2(c)(2)(v)(A)** The old level of actual emissions or the old level of allowable emissions (see paragraph 2.4.2(p)), whichever is lower, exceeds the new level of actual emissions.
- 2.4.2(c)(2)(v)(B)** It is enforceable (see paragraph 2.4.2(q)) at and after the time that actual construction on the particular change begins; and
- 2.4.2(c)(2)(v)(C)** It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.
- 2.4.2(c)(2)(vi)** An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- 2.4.2(c)(2)(vii)** 2.4.2(u)(1) shall not apply for determining creditable increases and decreases.

- 2.4.2(d)** "Potential to Emit" shall mean the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Secondary emissions (see paragraph 2.4.2(r)) do not count in determining the potential to emit of a stationary source.
- 2.4.2(e)** "Stationary Source" shall mean any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.
- 2.4.2(f)** "Building, Structure, Facility, or Installation" shall mean all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., which have the same first two digit code) as described in the Standard Industrial Classification Manual.
- 2.4.2(f)(1)** Notwithstanding the provisions of 2.4.2(f), building, structure, facility, or installation means, for onshore activities under SIC Major Group 13: Oil and Gas Extraction, all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites that are located within 1/4 mile of one another (measured from the center of the equipment on the surface site) and they share equipment. Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices. Surface site, as used here, means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.
- 2.4.2(g)** "Emissions Unit" shall mean any part of a stationary source which emits or would have the potential to emit any regulated NSR pollutant including an electric utility steam generating unit as defined in paragraph 2.4.2(vv). For purposes of Part 2.4, there are two types of emissions units as described in subparagraphs 2.4.2(g)(1) and (2).
- 2.4.2(g)(1)** A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.
- 2.4.2(g)(2)** An existing emissions unit is any emissions unit that does not meet the requirements in subparagraph 2.4.2(g)(1). A replacement unit, as defined in paragraph 2.4.2(bbb), is an existing emissions unit.
- 2.4.2(h)** "Construction" shall mean any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.
- 2.4.2(i)** "Commence" as applied to construction of a major stationary source or major modification shall mean that the owner or operator has all necessary preconstruction approvals or permits (see paragraph 2.4.2(j)) and either has:
- 2.4.2(i)(1)** Begun, or caused to begin, a continuous program of actual on-site construction (see paragraph 2.4.2(k)) of the source, to be completed within a reasonable time; or
- 2.4.2(i)(2)** Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.
- 2.4.2(j)** "Necessary Preconstruction Approvals or Permits" shall mean those permits or approvals required under Alabama air quality control laws and Jefferson County Board of Health Air Pollution Control Rules and Regulations which are part of the State Implementation Plan ("SIP").
- 2.4.2(k)** "Begin Actual Construction" shall mean, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.
- 2.4.2(l)** "Best Available Control Technology ("BACT")" shall mean an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the Health Officer, on a case-by-case basis,

taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of BACT result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR 60, 61, and 63. If the Health Officer determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results.

- 2.4.2(m)** "Baseline Concentration" shall mean that ambient concentration level which exists in the baseline area (see paragraph 2.4.2(o)) at the time of the applicable minor source baseline date. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:
- 2.4.2(m)(1)** The actual emissions, as defined in paragraph 2.4.2(u), representative of sources in existence on the applicable minor source baseline date, except as provided in subparagraph 2.4.2(m)(3); and
- 2.4.2(m)(2)** The allowable emissions of major stationary sources which commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.
- 2.4.2(m)(3)** The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):
- 2.4.2(m)(3)(i)** Actual emissions, as defined in paragraph 2.4.2(u), from any major stationary source on which construction commenced after the major source baseline date; and
- 2.4.2(m)(3)(ii)** Actual emissions increases and decreases, as defined in paragraph 2.4.2(u), at any stationary source occurring after the minor source baseline date.
- 2.4.2(n)** "Major Source Baseline Date" means in the case of particulate matter less than 10 microns in diameter and sulfur dioxide, January 6, 1975; in the case of nitrogen dioxide, the major source baseline date is February 8, 1988, and in the case of particulate matter less than 2.5 microns in diameter, the major source baseline is October 20, 2010.
- 2.4.2(n)(1)** "Minor Source Baseline Date" means the earliest date after the trigger date on which the first complete (see paragraph 2.4.2(v)) application is submitted by a major stationary source or major modification subject to the requirements of Federal PSD regulations or this part. The trigger date is:
- 2.4.2(n)(1)(i)** In the case of particulate matter less than 10 microns in diameter and sulfur oxides, August 7, 1977;
- 2.4.2(n)(1)(ii)** In the case of nitrogen dioxide, February 8, 1988; and
- 2.4.2(n)(1)(iii)** In the case of particulate matter less than 2.5 microns in diameter, October 20, 2011.
- 2.4.2(n)(2)** The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:
- 2.4.2(n)(2)(i)** The area in which the proposed source or modification would construct is designated as attainment or unclassifiable under §107(d)(1)(A)(ii) or (iii) of the CAA for the pollutant on the date of its complete application under Federal PSD regulations or under Part 2.4;
- 2.4.2(n)(2)(ii)** In the case of a major stationary source, the pollutant would be emitted in significant amounts or, in case of a major modification, there would be a significant net emissions increase of the pollutant.
- 2.4.2(n)(3)** Any minor source baseline date established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM₁₀ increments.
- 2.4.2(o)** "Baseline Area" shall mean any intrastate area (and every part thereof) designated as attainment or unclassifiable under §107(d)(1)(A)(ii) or (iii) of the CAA in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the minor source baseline date is established, as follows: equal to or greater than 1 µg/m³ (annual average) for SO₂, NO₂, or PM₁₀; or equal or greater than 0.3 µg/m³ (annual average) for PM_{2.5}.
- 2.4.2(o)(1)** Any baseline area established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM₁₀ increments.

- 2.4.2(p)** "Allowable Emissions" shall mean the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:
- 2.4.2(p)(1)** The applicable standards as set forth in 40 CFR 60, 61, and 63;
- 2.4.2(p)(2)** The applicable SIP emissions limitation, including those with a future compliance date; or
- 2.4.2(p)(3)** The emissions rate specified as an enforceable permit condition, including those with a future compliance date.
- 2.4.2(q)** "Enforceable" shall mean all limitations and conditions which are enforceable, including those requirements developed pursuant to 40 CFR 60, 61 and 63, requirements within the SIP, and any permit requirements established pursuant to Chapters 2, 17 and/or 18.
- 2.4.2(r)** "Secondary Emissions" shall mean emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purpose of this Part, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions may include, but are not limited to:
- 2.4.2(r)(1)** Emissions from ships or trains coming to or from the new or modified stationary source; and
- 2.4.2(r)(2)** Emissions from any offsite support facility which would not otherwise be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification.
- 2.4.2(s)** "Innovative Control Technology" shall mean any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reductions than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or non-air quality environmental impacts.
- 2.4.2(t)** "Fugitive Emissions" shall mean those emissions which could not reasonably pass through a stack, chimney, vent, roof monitor, or other functionally equivalent opening.
- 2.4.2(u)** "Actual Emissions" shall mean the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with subparagraphs 2.4.2(u)(1) through (u)(3) below, except that this definition shall not apply for establishing a PAL under Section 2.4.23. Instead, paragraphs 2.4.2(nn) and 2.4.2(uu) shall apply for those purposes.
- 2.4.2(u)(1)** In general, actual emissions as of any given date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year consecutive 24-month period which precedes the given date and which is representative of normal source operation. The Health Officer shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
- 2.4.2(u)(2)** The Health Officer may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
- 2.4.2(u)(3)** For any emissions unit which has not begun normal operations on the given date as determined in subparagraph 2.4.2(u)(1), actual emissions shall equal the potential to emit of the unit on that date.
- 2.4.2(v)** "Complete" shall mean, in reference to an application for a permit, that the application contains all of the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the Department from requesting or accepting any additional information.
- 2.4.2(w)** "Significant" shall mean, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant	Emissions (tons/yr)
Carbon monoxide	100
Nitrogen oxides	40
Sulfur dioxide	40
Particulate matter	25

Pollutant	Emissions (tons/yr)
PM ₁₀	15
PM _{2.5}	10 (of direct PM _{2.5}) 40 (of SO ₂ or NO _x)
Ozone	40 (of VOC or NO _x)
Lead	0.6
Fluorides (excluding HF)	3
Sulfuric acid mist	7
Hydrogen sulfide (H ₂ S)	10
Total reduced sulfur (including H ₂ S)	10
Reduced sulfur compounds (including H ₂ S)	10
Municipal waste combustor organics (measured as total tetra - through octa - chlorinated dibenzo - p - dioxins and dibenzofurans)	3.5 x 10 ⁻⁶
Municipal waste combustor metals (measured as particulate matter)	15
Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride)	40
Municipal solid waste landfill emissions (measured as nonmethane organic compounds)	50
Greenhouse gases (GHGs) as CO ₂ e	75,000

- 2.4.2(w)(1)** Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph 2.4.2(w) does not list: 100 TPY.
- 2.4.2(w)(2)** Notwithstanding paragraph 2.4.2(w), significant shall mean any emissions rate or any net emissions increase, excluding GHGs, associated with a major stationary source or major modification which would construct within ten (10) kilometers of a Class I area and have an impact on such area equal to or greater than 1 microgram per cubic meter (24-hour average).
- 2.4.2(w)(3)** For GHGs, if the new major stationary source or major modification is required to obtain a permit subject to the requirements of Part 2.4 as a result of emissions of regulated NSR pollutant other than GHGs, a source or modification would not be significant unless it results in:
- 2.4.2(w)(3)(i)** An emissions increase and a net emissions increase in GHGs on a total mass basis and
- 2.4.2(w)(3)(ii)** A significant emissions increase and a significant net emissions increase in GHGs on a CO₂e basis.
- 2.4.2(x)** "Federal Land Manager" shall mean, with respect to any lands in the United States, the Secretary of the Department with authority over such lands.
- 2.4.2(y)** "High Terrain" shall mean any area having an elevation 900 feet or more above the base of the stack of a source.
- 2.4.2(z)** "Low Terrain" shall mean any area other than high terrain.
- 2.4.2(aa)** "Indian Governing Body" shall mean the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.
- 2.4.2(bb)** "Indian Reservation" shall mean any Federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.
- 2.4.2(cc)** "Adverse impact on visibility" means visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of visibility impairments, and how these factors correlate with (1) times of visitor use of the Federal Class I area, and (2) the frequency and timing of natural conditions that reduce visibility.
- 2.4.2(dd)** "Visibility impairment" means any humanly perceptible change in visibility (light extinction, visual range, contrast, coloration) from that which would have existed under natural conditions.

- 2.4.2(ee)** "Natural conditions" includes naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.
- 2.4.2(ff)** "Environmentally Beneficial Activity" shall mean:
- 2.4.2(ff)(1)** Any activity or project undertaken at an existing emissions unit which, as its primary purpose, reduces emissions of air pollutants from such unit, and is limited to the installation or modification of any of the following:
- 2.4.2(ff)(1)(i)** Conventional or advanced flue gas desulfurization, or sorbent injection for SO₂;
- 2.4.2(ff)(1)(ii)** Electrostatic precipitators, baghouses, high efficiency multiclones, or scrubbers for particulate matter or other pollutants;
- 2.4.2(ff)(1)(iii)** Flue gas recirculation, low-NO_x burners, selective non-catalytic reduction or selective catalytic reduction for NO_x;
- 2.4.2(ff)(1)(iv)** Regenerative thermal oxidizers, condensers, thermal incinerators, flares, carbon adsorbers, or combustion devices installed or modified to comply with hazardous emission standards for volatile organic compounds or hazardous air pollutants;
- 2.4.2(ff)(1)(v)** Activities or projects undertaken to accommodate switching to an inherently less polluting fuel, including but not limited to natural gas or coal reburning, or the cofiring of natural gas and other inherently less polluting fuels, for the purpose of controlling emissions, and including any activity that is necessary to accommodate switching to an inherently less polluting fuel;
- 2.4.2(ff)(1)(vi)** Pollution prevention projects which the Health Officer determines to be environmentally beneficial.
- 2.4.2(ff)(1)(vii)** Installation or modification of a technology other than those listed in subdivisions 2.4.2(ff)(1)(i) through (v), for the purposes set forth in subparagraph 2.4.2(ff)(1), which has demonstrated an effectiveness at reducing emissions and is determined by the Health Officer to be environmentally beneficial.
- 2.4.2(ff)(2)** Environmentally beneficial projects do not include;
- 2.4.2(ff)(2)(i)** The replacement of an existing emissions unit with a newer or different unit;
- 2.4.2(ff)(2)(ii)** Reconstruction of an existing emissions unit;
- 2.4.2(ff)(2)(iii)** Pollution prevention projects which result in an increased risk from the release of hazardous air pollutants;
- 2.4.2(ff)(2)(iv)** Any project which would result in the increased production of an existing emissions unit.
- 2.4.2(ff)(2)(v)** Any project which reduces emissions solely by transferring them to or from another media.
- 2.4.2(ff)(2)(vi)** Any project which would cause an exceedance of an existing enforceable emissions limitation which was established to avoid applicability of the requirements of Part 2.4 and/or Part 2.5.
- 2.4.2(gg)** "Pollution Prevention Projects" shall mean any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal. It does not mean recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.
- 2.4.2(hh)** "Clean coal technology" means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- 2.4.2(ii)** "Clean coal technology demonstration project" means a project using funds appropriated under the heading "Department of Energy-Clean Coal Technology", up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- 2.4.2(jj)** "Temporary clean coal technology demonstration project" means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plans for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

- 2.4.2(kk)** “Repowering” means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
- 2.4.2(kk)(1)** Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
- 2.4.2(ll)** Reserved.
- 2.4.2(mm)** “Significant emissions increase” means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph 2.4.2(w)) for that pollutant.
- 2.4.2(nn)** “Projected actual emissions” means
- 2.4.2(nn)(1)** the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (consecutive 12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.
- 2.4.2(nn)(2)** In determining the projected actual emissions under paragraph 2.4.2(nn)(1) (before beginning actual construction), the owner or operator of the major stationary source:
- 2.4.2(nn)(2)(i)** Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under these regulations; and
- 2.4.2(nn)(2)(ii)** Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups and shutdowns; and
- 2.4.2(nn)(2)(iii)** Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph 2.4.2(uu) and that are not resulting from the particular project, including any increased utilization due to product demand growth; or
- 2.4.2(nn)(3)** In lieu of using the method set out in subdivisions 2.4.2(nn)(2)(i) through (iii), may elect to use the emissions unit's potential to emit, in tons per year, as defined under paragraph 2.4.2(d).
- 2.4.2(oo)** Reserved.
- 2.4.2(pp)** “Prevention of Significant Deterioration (PSD) program” means the preconstruction permit program in this Rule. Any permit issued under this program is a major NSR permit.
- 2.4.2(qq)** “Continuous emissions monitoring system (CEMS)” means all of the equipment that may be required to meet the data acquisition and availability requirements of this Rule, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.
- 2.4.2(rr)** “Predictive emissions monitoring system (PEMS)” means all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.
- 2.4.2(ss)** “Continuous parameter monitoring system (CPMS)” means all of the equipment necessary to meet the data acquisition and availability requirements of this Rule, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and to record average operational parameter value(s) on a continuous basis.

- 2.4.2(tt)** “Continuous emissions rate monitoring system (CERMS)” means the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).
- 2.4.2(uu)** “Baseline actual emissions” means the rate of emissions, in tons per year, of a regulated NSR pollutant, determined in accordance with subparagraphs 2.4.2(uu)(1) through 2.4.2(uu)(4).
- 2.4.2(uu)(1)** For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The Health Officer may allow the use of a different time period upon a determination that it is more representative of normal source operation.
- 2.4.2(uu)(1)(i)** The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups and shutdowns.
- 2.4.2(uu)(1)(ii)** The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.
- 2.4.2(uu)(1)(iii)** For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
- 2.4.2(uu)(1)(iv)** The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by subdivision 2.4.2(uu)(1)(ii).
- 2.4.2(uu)(2)** For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Department for a permit required under this Rule, whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.
- 2.4.2(uu)(2)(i)** The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups and shutdowns.
- 2.4.2(uu)(2)(ii)** The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
- 2.4.2(uu)(2)(iii)** The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under 40 CFR 63, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of 40 CFR §51.165(a)(3)(ii)(G).
- 2.4.2(uu)(2)(iv)** For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
- 2.4.2(uu)(2)(v)** The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by subdivisions 2.4.2(uu)(2)(ii) and (iii).
- 2.4.2(uu)(3)** For a new emissions unit, as defined in subparagraph 2.4.2(g)(1), the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero. During the first two years from the date which the emissions unit commenced operation, the baseline actual emissions shall equal the potential to emit for the unit. Thereafter, the unit will be considered an existing emissions unit and the baseline actual emissions will be determined in accordance with subparagraph 2.4.2(uu)(1) for an electric steam generating unit or subparagraph 2.4.2(uu)(2) for other emissions units.

- 2.4.2(uu)(4)** For a PAL for a stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in subparagraph 2.4.2(uu)(1), for other existing emissions units in accordance with the procedures contained in subparagraph 2.4.2(uu)(2), and for a new emissions unit in accordance with the procedures contained in subparagraph 2.4.2(uu)(3).
- 2.4.2(vv)** “Electric utility steam generating unit” means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
- 2.4.2(ww)** “Regulated NSR pollutant”, for purposes of this Rule, means the following:
- 2.4.2(ww)(1)** Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator of EPA (e.g., volatile organic compounds and NO_x are precursors for ozone);
- 2.4.2(ww)(2)** Any pollutant that is subject to any standard promulgated under §111 of the Clean Air Act;
- 2.4.2(ww)(3)** Any Class I or II substance subject to a standard promulgated under or established by title VI of the Clean Air Act; or
- 2.4.2(ww)(4)** Any pollutant that otherwise is subject to regulation under the Clean Air Act; except that any or all hazardous air pollutants either listed in §112 of the Clean Air Act, including compounds listed in 40 CFR 68 pursuant to §112(r) of the Clean Air Act, or added to the list pursuant to §112(b)(2) of the Clean Air Act, which have not been delisted pursuant to §112(b)(3) of the Clean Air Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under §108 of the Clean Air Act.
- 2.4.2(ww)(5)** PM_{2.5} and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. Such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM, PM_{2.5} and PM₁₀. Applicability determinations made prior to January 1, 2011 without accounting for condensable particulate matter shall not be considered invalid.
- 2.4.2(xx)** Reserved.
- 2.4.2(yy)** “Project” means a physical change in, or change in the method of operation of, an existing major stationary source.
- 2.4.2(zz)** “Greenhouse gases (GHGs)” means the aggregate of: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
- 2.4.2(aaa)** CO₂ equivalent emissions (CO₂e) shall represent the amount of GHGs emitted as computed by the following:
- 2.4.2(aaa)(1)** Multiplying the mass amount of emissions (TPY) for each of the six greenhouse gases in the pollutant GHGs by the gas’s associated global warming potential as listed in Appendix G.
- 2.4.2(aaa)(2)** Sum the resultant value determined in subparagraph 2.4.2(aaa)(1) for each gas to calculate the TPY of CO₂e.
- 2.4.2(bbb)** “Replacement unit” means an emissions unit for which all the criteria listed in subparagraphs 2.4.2(bbb)(1) through (4) are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced. A replacement unit is subject to all permitting requirements for modifications under this rule.
- 2.4.2(bbb)(1)** The emissions unit is a reconstructed unit within the meaning of 40 CFR §60.15(b)(1), or the emissions unit completely takes the place of an existing emissions unit.
- 2.4.2(bbb)(2)** The emissions unit is identical to or functionally equivalent to the replaced emissions unit. A functionally equivalent unit would be a unit that serves the same purpose as the replaced unit. The Health Officer shall be the determiner of whether a unit is functionally equivalent to the replaced unit.
- 2.4.2(bbb)(3)** The replacement does not alter the basic design parameters of the process unit. Basic design parameters shall include, but not be limited to, maximum hourly heat input, maximum hourly fuel utilization, or maximum hourly raw material feed, as appropriate. Basic design parameters of a replaced unit shall also include all source specific emission limits and/or monitoring requirements. The Health Officer shall be the determiner of whether the basic design parameters of the replaced unit are altered.

2.4.2(bbb)(4) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

2.4.2(bbb)(5) A Replacement Unit as defined in this paragraph shall be subject to the applicability test in paragraph 2.4.1(f) for any modification.

2.4.2(ccc) Volatile organic compounds (VOC) is as defined in § 51.100(s).

2.4.3 Ambient Air Increments. In areas designated as Class I, II, or III, increases in pollutant concentration over the baseline concentration shall be limited to the following:

Area	Pollutant	Maximum Allowable Increase (micrograms per cubic meter)	
Class I	PM ₁₀ :	Annual arithmetic mean	4
		24-hour maximum	8
	PM _{2.5} :	Annual arithmetic mean	1
		24-hour maximum	2
	Sulfur dioxide:	Annual arithmetic mean	2
		24-hour maximum	5
		3-hour maximum	25
	Nitrogen dioxide:	Annual arithmetic mean	2.5
Class II	PM ₁₀ :	Annual arithmetic mean	17
		24-hour maximum	30
	PM _{2.5} :	Annual arithmetic mean	4
		24-hour maximum	9
	Sulfur dioxide:	Annual arithmetic mean	20
		24-hour maximum	91
		3-hour maximum	512
	Nitrogen dioxide:	Annual arithmetic mean	25
Class III	PM ₁₀ :	Annual arithmetic mean	34
		24-hour maximum	60
	PM _{2.5} :	Annual arithmetic mean	8
		24-hour maximum	18
	Sulfur dioxide:	Annual arithmetic mean	40
		24-hour maximum	182
		3-hour maximum	700
	Nitrogen dioxide:	Annual arithmetic mean	50

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

2.4.4 Ambient Air Ceilings. No concentration of a pollutant shall exceed:

2.4.4(a) The concentration permitted under the National Secondary Ambient Air Quality Standard, or

2.4.4(b) The concentration permitted under the National Primary Ambient Air Quality Standard, whichever concentration is lowest for the pollutant for a period of exposure.

2.4.5 Area Classifications.

2.4.5(a) The following area, which was in existence on August 7, 1977, shall be a Class I area and may not be redesignated:

2.4.5(a)(1) The Sipsey Wilderness Area located in Franklin, Winston, and Lawrence counties, Alabama.

2.4.5(b) Any other area is initially designated Class II.

2.4.6 Exclusions from Increment Consumption.

2.4.6(a) The following concentrations shall be excluded in determining compliance with a maximum allowable increase:

2.4.6(a)(1) Concentrations attributable to the increase in emissions from stationary sources which have converted from the use of petroleum products, natural gas, or both by reason of an order in effect under §§2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such an order;

2.4.6(a)(2) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from such sources before the effective date of such plan;

2.4.6(a)(3) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emission-related activities of new or modified sources;

2.4.6(a)(4) The increase in concentrations attributable to new sources outside the United States over the concentrations attributable to existing sources which are included in the baseline concentration; and

2.4.6(a)(5) Concentrations attributable to the temporary increase in emissions of sulfur dioxide, particulate matter, or nitrogen oxides from stationary sources which are affected by plan revisions approved by the EPA as being exempt from increment consumption.

2.4.6(b) No exclusion of such concentrations shall apply for more than five years after the effective date of the order to which subparagraph 2.4.6(a)(1) or the plan to which subparagraph 2.4.6(a)(2) refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply for more than five years after the later of such effective dates.

2.4.7 Reserved.

2.4.8 Review of Major Stationary Sources and Major Modifications-Source Applicability and Exemptions.

2.4.8(a) No major stationary source or major modification shall begin actual construction unless, as a minimum, requirements contained in Sections 2.4.9 through 2.4.17 have been met.

2.4.8(b) The requirements contained in Sections 2.4.9 through 2.4.17 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the CAA that it would emit, except as this part would otherwise allow.

2.4.8(c) The requirements contained in Sections 2.4.9 through 2.4.17 apply only to any major stationary source or major modification that would be constructed in an area designated as attainment or unclassified under §107(d)(1)(A)(ii) or (iii) of the CAA.

2.4.8(d) The requirements contained in Sections 2.4.9 through 2.4.17 shall not apply to a major stationary source or major modification, if:

2.4.8(d)(1) Reserved.

2.4.8(d)(2) Reserved.

2.4.8(d)(3) Reserved.

2.4.8(d)(4) Reserved.

2.4.8(d)(5) Reserved.

2.4.8(d)(6) The source or modification would be a nonprofit health or nonprofit educational institution, or a major modification would occur at such an institution; or

- 2.4.8(d)(7)** The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification, and the source does not belong to any of the following categories:
- 2.4.8(d)(7)(i)** Coal cleaning plants (with thermal dryers);
 - 2.4.8(d)(7)(ii)** Kraft pulp mills;
 - 2.4.8(d)(7)(iii)** Portland cement plants;
 - 2.4.8(d)(7)(iv)** Primary zinc smelters;
 - 2.4.8(d)(7)(v)** Iron and steel mills;
 - 2.4.8(d)(7)(vi)** Primary aluminum ore reduction plants;
 - 2.4.8(d)(7)(vii)** Primary copper smelters;
 - 2.4.8(d)(7)(viii)** Municipal incinerators capable of charging more than 250 tons of refuse per day;
 - 2.4.8(d)(7)(ix)** Hydrofluoric, sulfuric or nitric acid plants;
 - 2.4.8(d)(7)(x)** Petroleum refineries;
 - 2.4.8(d)(7)(xi)** Lime plants;
 - 2.4.8(d)(7)(xii)** Phosphate rock processing plants;
 - 2.4.8(d)(7)(xiii)** Coke oven batteries;
 - 2.4.8(d)(7)(xiv)** Sulfur recovery plants;
 - 2.4.8(d)(7)(xv)** Carbon black plants (furnace process);
 - 2.4.8(d)(7)(xvi)** Primary lead smelters;
 - 2.4.8(d)(7)(xvii)** Fuel conversion plants;
 - 2.4.8(d)(7)(xviii)** Sintering plants;
 - 2.4.8(d)(7)(xix)** Secondary metal production plants;
 - 2.4.8(d)(7)(xx)** Chemical process plants – the term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in the NAICS codes 325193 or 312140;
 - 2.4.8(d)(7)(xxi)** Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
 - 2.4.8(d)(7)(xxii)** Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - 2.4.8(d)(7)(xxiii)** Taconite ore processing plants;
 - 2.4.8(d)(7)(xxiv)** Glass fiber processing plants;
 - 2.4.8(d)(7)(xxv)** Charcoal production plants;
 - 2.4.8(d)(7)(xxvi)** Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; and
 - 2.4.8(d)(7)(xxvii)** Any other stationary source category which, as of August 7, 1980, is being regulated under §111 or 112 of the CAA; or
- 2.4.8(d)(8)** The source is a portable stationary source which has previously received a permit under this part; and
- 2.4.8(d)(8)(i)** The owner or operator proposes to relocate the source and emissions of the source at the new location would be temporary; and
 - 2.4.8(d)(8)(ii)** The emissions from the source would not exceed its allowable emissions; and
 - 2.4.8(d)(8)(iii)** The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and

- 2.4.8(d)(8)(iv)** Reasonable notice is given to the Health Officer prior to relocation identifying the proposed new location and the probable duration of operation at the new location. Such notice shall be given to the Health Officer not less than ten (10) days in advance of the proposed relocation unless a different time duration is previously approved by the Health Officer.
- 2.4.8(e)** The requirements of Sections 2.4.9 through 2.4.17 shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment under §107 of the CAA.
- 2.4.8(f)** The requirements of Sections 2.4.10, 2.4.12 and 2.4.14 shall not apply to a major stationary source or major modification with respect to a particular pollutant if the allowable emissions of that pollutant from the source or the net emissions increase of that pollutant from the modification:
- 2.4.8(f)(1)** Would impact no Class I area and no area where an applicable increment is known to be violated, and
- 2.4.8(f)(2)** Would be temporary.
- 2.4.8(g)** The requirements of Section 2.4.10, 2.4.12 and 2.4.14 as they relate to any maximum allowable increase for a Class II area shall not apply to a major modification at a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each regulated NSR pollutant subject to regulation under the CAA from the modification after the application of BACT would be less than 50 tons per year.
- 2.4.8(h)** The Health Officer may exempt a stationary source or modification from the requirements of Section 2.4.12 with respect to monitoring for a particular pollutant if:
- 2.4.8(h)(1)** The emissions increase of the pollutant from the new source or the net emissions increase of the pollutants from the modification would cause, in any area, air quality impacts which are less than the following amounts:

Carbon Monoxide	575 µg/m ³ ,	8-hour average
Nitrogen dioxide	14 µg/m ³ ,	annual average
PM ₁₀	10 µg/m ³ ,	24-hour average
PM _{2.5}	Reserved. ¹	Reserved.
Sulfur dioxide	13 µg/m ³ ,	24-hour average
Ozone ²		
Lead	0.1 µg/m ³ ,	3-month average
Fluorides	0.25 µg/m ³ ,	24-hour average
Total reduced sulfur	10 µg/m ³ ,	1-hour average
Hydrogen sulfide	0.2 µg/m ³ ,	1-hour average

or

- 2.4.8(h)(2)** The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in subparagraph 2.4.8(h)(1), or the pollutant is not listed in subparagraph 2.4.8(h)(1); or
- 2.4.8(h)(3)** The owner or operator of the stationary source or modification submits an application under Section 2.4.8 that the Health Officer determines is complete, except with respect to the requirements for monitoring PM₁₀ in Section 2.4.12, on or before June 1, 1988. If a complete permit application is received after June 1, 1988, but not later than December 1, 1988, the requirements for PM₁₀ monitoring under Section 2.4.12 apply in that data shall have been gathered over at least the period from February 1, 1988 to the date the complete application is received, except that if the Health Officer determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than four months) then the shorter period of data gathering will suffice to meet the requirements of Section 2.4.12.

¹ In accordance with *Sierra Club v. EPA*, 706 F.3d 428 (D.C. Cir. 2013), no exemption from monitoring is available with regard to PM_{2.5}.

² No *de minimis* air quality level is provided for ozone. However, any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of air quality data.

- 2.4.8(i)** Reserved.
- 2.4.8(j)** Reserved.
- 2.4.8(k)** At the discretion of the Health Officer, the requirements for air quality monitoring of PM₁₀ in subparagraphs 2.4.12(a)(1) through (4) may not apply to a particular source or modification when the owner or operator of the source or modification submits an application for a permit under Part 2.4 on or before June 1, 1988 and the Health Officer determines that the application as submitted before that date was complete, except with respect to the requirements for monitoring PM₁₀ in subparagraphs 2.4.12(a)(1) through (4).
- 2.4.8(l)** The requirements for air quality monitoring of PM₁₀ in subparagraphs 2.4.12(a)(2) and (4) and paragraph 2.4.12(c) shall apply to a particular source or modification if the owner or operator of the source or modification submits an application for a permit under Part 2.4 after June 1, 1988 and no later than December 1, 1988. The data shall have been gathered over at least the period from February 1, 1988 to the date the application becomes otherwise complete in accordance with the provisions set forth under subparagraph 2.4.12(a)(8), except that if the Health Officer determines that a complete and adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that subparagraph 2.4.12(a)(3) requires shall have been gathered over that shorter period.
- 2.4.8(m)** Any project which is an environmentally beneficial project as defined in Paragraph 2.4.2(ff) shall not be considered a major modification as defined in paragraph 2.4.2(b) and is exempt from all provisions of these rules and regulations except Sections 2.4.10, 2.4.11, 2.4.13, 2.4.15, and 2.4.16.
- 2.4.8(n)** The requirements of Paragraphs 2.4.10, 2.4.11, 2.4.12, 2.4.14 and 2.4.15 shall not apply with respect to GHGs for any major stationary source or major modification.
- 2.4.9** Control Technology Review.
- 2.4.9(a)** A major stationary source or major modification shall meet each applicable emissions limitation under the SIP and each applicable emissions limitation standard and standard of performance under 40 CFR 60 and 61.
- 2.4.9(b)** A new major stationary source shall apply BACT for each regulated NSR pollutant that it would have the potential to emit in significant amounts.
- 2.4.9(c)** A major modification shall apply BACT for each regulated NSR pollutant for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of physical change or change in the method of operation in the unit.
- 2.4.9(d)** For phased construction projects, the determination of BACT shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than eighteen (18) months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of BACT for the source.
- 2.4.10** Source Impact Analysis.
- 2.4.10(a)** Required Demonstration. The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of;
- 2.4.10(a)(1)** Any National Ambient Air Quality Standard ("NAAQS") in any air quality control region; or
- 2.4.10(a)(2)** Any applicable maximum allowable increase over the baseline concentration in any area.
- 2.4.10(b)** Significant Impact Levels. A major source or major modification will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the applicable national standard:

(table appears on next page)

Pollutant	Averaging Time	Class I Significance Level	Class II Significance Level
SO ₂	3 hour		25 µg/m ³
	24 hour		5 µg/m ³
	Annual		1.0 µg/m ³
PM ₁₀	24 hour		5 µg/m ³
	Annual		1.0 µg/m ³
PM _{2.5}	24 hour	0.27 µg/m ³	1.2 µg/m ³
	Annual	0.03 µg/m ³	0.13 µg/m ³
NO ₂	Annual		1.0 µg/m ³
CO	1 hour		2,000 µg/m ³
	8 hour		500 µg/m ³

2.4.11 Air Quality Models.

2.4.11(a) All estimates of ambient concentrations required under this rule shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51, Appendix W, the "Guideline on Air Quality Models." (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711)

2.4.12 Air Quality Analysis.

2.4.12(a) Preapplication Analysis.

2.4.12(a)(1) Any application for a permit under this Part shall contain an analysis of ambient air quality in the area that the major stationary source or major modification would affect for each of the following pollutants:

2.4.12(a)(1)(i) For the source, each pollutant that it would have the potential to emit in a significant amount;

2.4.12(a)(1)(ii) For the modification, each pollutant for which it would result in a significant net emissions increase.

2.4.12(a)(2) With respect to any such pollutant for which no NAAQS exists, the analysis shall contain such air quality monitoring data as the Health Officer determines is necessary to assess ambient air quality for that pollutant in any area that the emission of that pollutant would affect.

2.4.12(a)(3) With respect to any such pollutant (other than nonmethane hydrocarbons) for which such a standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase.

2.4.12(a)(4) In general, the continuous air quality monitoring data that is required shall have been gathered over a period of at least one (1) year and shall represent the year preceding receipt of the application, except that, if the Health Officer determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one (1) year (but not to be less than four (4) months), the data that is required shall have been gathered over at least that shorter period.

2.4.12(a)(5) Reserved.

2.4.12(a)(6) The owner or operator of a proposed stationary source or modification of VOC who satisfies all conditions of Part 2.5 and 40 CFR 51, Appendix S, Section IV may provide post-approval monitoring data for ozone in lieu of providing preconstruction data as required under Paragraph 2.4.12(a).

2.4.12(a)(7) For any application that becomes complete, except as to the requirements of subparagraphs 2.4.12(a)(3) and (4) pertaining to PM₁₀, after December 1, 1988 and no later than August 1, 1989 the data that subparagraph 2.4.12(a)(3) requires shall have been gathered over at least the period from August 1, 1988, to the date the application becomes otherwise complete, except that if the Health Officer determines that a complete and

adequate analysis can be accomplished with monitoring data over a shorter period (not to be less than 4 months), the data that subparagraph 2.4.12(a)(3) requires shall have been gathered over that shorter period.

- 2.4.12(a)(8)** With respect to any requirements for air quality monitoring of PM₁₀ under paragraphs 2.4.8(k) and (l), the owner or operator of the source or modification shall use a monitoring method approved by the Health Officer and shall estimate the ambient concentrations of PM₁₀ using the data collected by such approved monitoring method in accordance with estimating procedures approved by the Health Officer.
- 2.4.12(b)** Post-construction Monitoring. The owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring as the Health Officer determines is necessary to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area.
- 2.4.12(c)** Operations of Monitoring Stations. The owner or operator of a major stationary source or major modification shall meet the requirements of 40 CFR 58, Appendix B during the operation of monitoring stations for purposes of satisfying Section 2.4.12.
- 2.4.12(d)** Visibility Monitoring. The Health Officer may require monitoring of visibility in any Federal Class I area near the proposed new stationary source or major modification for such purposes and by such means as the Health Officer deems necessary and appropriate.
- 2.4.13** Source Information. The owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or to make any determination required under this rule.
- 2.4.13(a)** With respect to a source or modification to which Sections 2.4.9, 2.4.10, 2.4.12, and 2.4.14 apply, such information shall include:
 - 2.4.13(a)(1)** A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;
 - 2.4.13(a)(2)** A detailed schedule for construction of the source or modification;
 - 2.4.13(a)(3)** A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates and any other information necessary to determine that BACT would be applied.
- 2.4.13(b)** Upon request of the Health Officer, the owner or operator shall also provide information on:
 - 2.4.13(b)(1)** The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and
 - 2.4.13(b)(2)** The air quality impacts and the nature and extent of any or all general commercial, residential, industrial, and other growth which was occurred since August 7, 1977, in the area the source or modification would affect.
- 2.4.14** Additional Impact Analyses.
 - 2.4.14(a)** The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial, and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.
 - 2.4.14(b)** The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source or modification.
- 2.4.15** Sources Impacting Federal Class I Areas - Additional Requirements.
 - 2.4.15(a)** Notice to Federal Land Managers and to EPA. The Health Officer shall provide notice of any permit application for a proposed major stationary source or major modification the emissions from which would affect a Class I area to EPA, the Federal Land Manager and the Federal official charged with direct responsibility for management of any lands within any such area. The Health Officer shall provide such notice promptly after receiving the application. The Health Officer shall also provide EPA, the Federal Land Manager and such Federal officials with notice of every action related to the consideration of such permit.
 - 2.4.15(b)** The Health Officer shall notify all affected Federal Land Managers within 30 days of receipt of an advance notification of any permit application for a proposed major stationary source or modification, the emissions from which may affect a Class I area. The Health Officer shall provide written notification to all affected Federal Land Managers within

30 days of receiving the permit application. At least 30 days prior to the publication of the notice for public comment on the application, the Health Officer shall provide the Federal Land Manager with a copy of all information relevant to the permit application including an analysis provided by the source of the potential impact of the proposed source on visibility.

- 2.4.15(c)** Visibility Analysis. The Health Officer shall consider any analysis performed by the Federal Land Manager concerning visibility impairment if the analysis is received within 30 days of being provided the permit application information and analysis required by paragraph 2.4.15(b). Where the Health Officer finds that such an analysis does not demonstrate to the satisfaction of the Health Officer that an adverse impact on visibility will result in the Federal Class I area, the Health Officer must, in the notice of public comment on the permit application, either explain his decision or give notice as to where the explanation can be obtained.
- 2.4.15(d)** Denial - Impact on Air Quality Related Values. The Federal Land Manager of any such lands may demonstrate to the Health Officer that the emissions from a proposed source or modification would have an adverse impact on the air quality related values (including visibility) of those lands, notwithstanding that the change in air quality resulting from emissions from such source or modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Health Officer concurs with such demonstration, then he shall not issue the permit.
- 2.4.15(e)** Class I Variances. The owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality related values of any such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal Land Manger concurs with such demonstration and he so certifies, the Health Officer may issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, PM_{2.5}, PM₁₀, and nitrogen oxides would not exceed the following maximum allowable increases over minor source baseline concentration for such pollutants:

Pollutant	Maximum Allowable Increase (micrograms per cubic meter)	
	PM ₁₀	Annual arithmetic mean
24-hour maximum		30
PM _{2.5}	Annual arithmetic mean	4
	24-hour maximum	9
SO ₂	Annual arithmetic mean	20
	24-hour maximum	91
	3-hour maximum	325
NO ₂	Annual arithmetic mean	25

provided, the applicable requirements of this rule are otherwise met.

- 2.4.15(f)** Sulfur Dioxide Variance by Governor with Federal Land Manager's Concurrence. The owner or operator of a proposed source or modification which cannot be approved under paragraph 2.4.15(e) may demonstrate to the Governor that the source or modification cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for a period of twenty-four (24) hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility). The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may, after notice and public hearing, grant a variance from such maximum allowable increase. If such variance is granted, the Health Officer shall issue a permit to such source or modification pursuant to the requirements of Section 2.4.15(h), provided, that the applicable requirements of Part 2.4 are otherwise met.
- 2.4.15(g)** Variance by the Governor with the President's Concurrence. In any case where the Governor recommends a variance in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that the variance is in the national interest. If the variance is approved, the Health Officer shall issue a permit pursuant to the requirements of Section 2.4.15(h), provided, that the applicable requirements of Part 2.4 are otherwise met.

2.4.15(h) Emission Limitation for Presidential or Gubernatorial Variance. In the case of a permit issued pursuant to paragraphs 2.4.15(f) or (g), the source or modification shall comply with such emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentrations and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for period of exposure of twenty four (24) hours or less for more than eighteen (18) days, not necessarily consecutive, during any annual period:

Period of Exposure	Maximum Allowable Increase (micrograms per cubic meter)	
	Terrain Areas	
	Low	High
24-hour maximum	36	62
3-hour maximum	130	221

2.4.16 Public Participation.

2.4.16(a) After receipt of an application for an Air Permit or any addition to such application, the Health Officer shall advise the applicant of any deficiency in the application or in the information submitted. In the event of such a deficiency, the date of receipt of the application shall be, for the purpose of this Part, the date on which the Health Officer received all required information.

2.4.16(b) Within one (1) year after receipt of a complete application, the Health Officer shall make a final determination on the application. This involves performing the following actions in a timely manner:

2.4.16(b)(1) Make a preliminary determination whether construction should be approved, approved with conditions or disapproved.

2.4.16(b)(2) Make available in at least one location in each region in which the proposed source or modification would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination and a copy or summary of other materials, if any, considered in making the preliminary determination.

2.4.16(b)(3) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source or modification would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for written public comment, as well as comment at a public hearing. Public comments will be accepted for at least 30 days from the date of initial publication.

2.4.16(b)(4) Send a copy of the notice of public comment to the applicant, to EPA and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: any other State or local air pollution control agencies, the chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency and any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the source or modification.

2.4.16(b)(5) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, alternatives to the source or modification, the control technology required, and other appropriate considerations.

2.4.16(b)(6) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than ten (10) days after the close of the public comment period, the applicant may, as part of the public record, submit a written response to any comments submitted by the public. The Health Officer shall consider the applicant's response in making a final decision. The Health Officer shall make all comments available for public inspection in the same locations where the Health Officer made available preconstruction information relating to the proposed source or modification.

2.4.16(b)(7) Make a final determination whether construction should be approved, approved with conditions or disapproved pursuant to this Part.

2.4.16(b)(8) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Health Officer made available preconstruction information and public comments relating to the source or modification.

2.4.17 Source Obligation.

2.4.17(a) An Air Permit authorizing construction shall become invalid if construction is not commenced within twenty-four (24) months after receipt of such approval, if construction is discontinued for a period of twenty-four (24) months or more, or if construction is not completed within a reasonable time. The Health Officer may extend the twenty-four (24) month period upon satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within twenty-four (24) months of the projected and approved commencement date.

2.4.17(b) An Air Permit authorizing construction shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the SIP and any other requirements under local, State or Federal law.

2.4.17(c) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of Sections 2.4.9 through 2.4.17 shall apply to the source or modification as though construction had not yet commenced on the source or modification.

2.4.17(d) The provisions of this Paragraph 2.4.17(d) apply to projects at an existing emissions unit at a major stationary source (other than projects at a source with a PAL), that are not excluded from the definition of physical change or change in the method of operation, in circumstances where the owner or operator elects to use the method specified in Subdivisions 2.4.2(nn)(2)(i) through (iii) for calculating projected actual emissions and the owner calculates that the project will result in a projected actual emissions increase that, added to the amount of emissions excluded under 2.4.2(nn)(2)(iii), sums to less than 50% of the amount that is a significant emissions increase as defined under 2.4.2(mm) (without reference to the amount that is a significant net emissions increase) for the regulated NSR pollutant. (This is equivalent to stating that "there is not a reasonable possibility that the project will result in a significant emissions increase.")

2.4.17(d)(1) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

2.4.17(d)(1)(i) A description of the project;

2.4.17(d)(1)(ii) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and

2.4.17(d)(1)(iii) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Subdivision 2.4.2(nn)(2)(iii) and an explanation for why such amount was excluded, and any netting calculations, if applicable.

2.4.17(d)(2) The owner or operator of the source shall make the information required to be documented and maintained pursuant to Paragraph 2.4.17(d)(1) available for review upon a request for inspection by the Department or the general public.

2.4.17(d)(3) Nothing in this subparagraph shall be construed to exempt the owner or operator of such a unit from obtaining any minor source Air Permit in accordance with the requirements of Chapter 2.

2.4.17(e) The provisions of paragraph 2.4.17(e) apply to projects at an existing emissions unit at a major stationary source (other than projects at a source with a PAL) in circumstances where the owner or operator elects to use the method specified in Subdivisions 2.4.2(nn)(2)(i) through (iii) for calculating projected actual emissions and the owner or operator calculates that the project will result in a projected actual emissions increase that is equal to or greater than 50 % and less than 100% of the amount that is a significant emissions increase as defined under 2.4.2(mm) (without reference to the amount that is a significant net emissions increase) for the regulated NSR pollutant and is not subject to 2.4.17(d). (This is equivalent to stating that "there is a reasonable possibility that the project will result in a significant emissions increase.")

2.4.17(e)(1) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:

- 2.4.17(e)(1)(i)** A description of the project;
 - 2.4.17(e)(1)(ii)** Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - 2.4.17(e)(1)(iii)** A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Subdivision 2.4.2(nn)(2)(iii) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- 2.4.17(e)(2)** Before beginning actual construction, the owner or operator shall provide a copy of the information set out in subparagraph 2.4.17(e)(1) to the Health Officer. Nothing in this subparagraph shall be construed to require the owner or operator of such a unit to obtain any determination from the Health Officer before beginning actual construction; however, nothing in this section shall be construed to exempt the owner or operator of such a unit from obtaining any minor source Air Permit in accordance with the requirements of Chapter 2.
- 2.4.17(e)(3)** The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in subdivision 2.4.17(e)(1)(ii); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit that regulated NSR pollutant at such emissions unit.
- 2.4.17(e)(4)** The owner or operator shall submit a report to the Health Officer within 60 days after the end of each year during which records must be generated under subparagraph 2.4.17(e)(3) containing the following:
- 2.4.17(e)(4)(i)** All information required by subparagraph 2.4.17(e)(1);
 - 2.4.17(e)(4)(ii)** The name, address and telephone number of the major stationary source;
 - 2.4.17(e)(4)(iii)** The annual emissions as calculated pursuant to subparagraph 2.4.17(e)(3); and
 - 2.4.17(e)(4)(iv)** Any other information that the owner or operator wishes to include in the report.
- 2.4.17(e)(5)** The owner or operator of the source shall make the information required to be documented and maintained pursuant to paragraph 2.4.17(e) available for review upon a request for inspection by the Department or the general public.
- 2.4.17(e)(6)** All information submitted to the Department pursuant to paragraph 2.4.17(e) of this Rule shall be available for review at the request of any member of the public in accordance with the Department's public records review procedures found in Part 1.6.
- 2.4.18 Innovative Control Technology.**
- 2.4.18(a)** An owner or operator of a proposed major stationary source or major modification may request the Health Officer in writing no later than the close of the comment period under Section 2.4.16 to approve a system of innovative control technology.
- 2.4.18(b)** The Health Officer shall determine that the source or modification may employ a system of innovative control technology, if:
- 2.4.18(b)(1)** The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare or safety in its operation or function;
 - 2.4.18(b)(2)** The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under Paragraph 2.4.9(b) by a date specified by the Health Officer. Such date shall not be later than four (4) years from the time of startup or seven (7) years from permit issuance;
 - 2.4.18(b)(3)** The source or modification would meet the requirements of Sections 2.4.9 and 2.4.10 based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the Health Officer;
 - 2.4.18(b)(4)** The source or modification would not before the date specified by the Health Officer:
 - 2.4.18(b)(4)(i)** Cause or contribute to a violation or an applicable NAAQS; or

- 2.4.18(b)(4)(ii)** Impact any Class I area; or
- 2.4.18(b)(4)(iii)** Impact any area where an applicable increment is known to be violated; and
- 2.4.18(b)(5)** The consent of the Governor of any other affected state is secured;
- 2.4.18(b)(6)** All other applicable requirements including those for public participation have been met.
- 2.4.18(c)** The Health Officer shall withdraw any approval to employ a system of innovative control technology made under this section if:
 - 2.4.18(c)(1)** The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or
 - 2.4.18(c)(2)** The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare or safety; or
 - 2.4.18(c)(3)** The Health Officer decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare or safety.
- 2.4.18(d)** If a source or modification fails to meet the required level of continuous emission reduction within the specified time period or the approval is withdrawn in accordance with Paragraph 2.4.18(c), the Health Officer may allow the source or modification up to an additional three (3) years to meet the requirement for the application of BACT through use of a demonstrated system of control.
- 2.4.19** Permit Rescission.
 - 2.4.19(a)** Any owner or operator of a stationary source or modification who holds a permit for the source or modification which was issued under Part 2.4 as in effect on July 30, 1987 or any earlier versions of this Part may request that the Health Officer rescind the permit or a particular portion of the permit.
 - 2.4.19(b)** The Health Officer shall grant an application for rescission if the application shows that this Part would not apply to the source or modification.
 - 2.4.19(c)** If the Health Officer rescinds a permit under this section, the public shall be given adequate notice of the rescission. Publication of an announcement of rescission in a newspaper of general circulation in the affected region within 60 days of the rescission shall be considered adequate notice.
- 2.4.20** Reserved.
- 2.4.21** Reserved.
- 2.4.22** Reserved.
- 2.4.23** Actuals PALs. The provisions in Paragraphs 2.4.23(a) through (o) govern actuals PALs.
 - 2.4.23(a)** Applicability.
 - 2.4.23(a)(1)** The Health Officer may approve the use of an actuals PAL for any existing major stationary source if the PAL meets the requirements in Paragraphs 2.4.23(a) through (o). The term "PAL" shall mean "actuals PAL" throughout Section 2.4.23.
 - 2.4.23(a)(2)** Any physical change in or change in the method of operation of a major stationary source that maintains its total source-wide emissions below the PAL level, meets the requirements in Paragraphs 2.4.23(a) through (o), and complies with the PAL permit:
 - 2.4.23(a)(2)(i)** Is not a major modification for the PAL pollutant;
 - 2.4.23(a)(2)(ii)** Does not have to be approved through the major NSR program; and
 - 2.4.23(a)(2)(iii)** Is not subject to the provisions in paragraph 2.4.17(c) (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major NSR program).
 - 2.4.23(a)(3)** A major stationary source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

- 2.4.23(b)** Definitions. For the purposes of Section 2.4.23, the definitions in Subparagraphs 2.4.23(b)(1) through 2.4.23(b)(11) apply. When a term is not defined in these paragraphs, it shall have the meaning given in Section 2.4.2 or in the Clean Air Act.
- 2.4.23(b)(1)** “Actuals PAL” for a major stationary source means a PAL based on the baseline actual emissions (as defined in Paragraph 2.4.2(uu)) of all emissions units (as defined in Paragraph 2.4.2(g)) at the source, that emit or have the potential to emit the PAL pollutant.
- 2.4.23(b)(2)** “Allowable emissions” means “allowable emissions” as defined in Paragraph 2.4.2(p) except as this definition is modified according to Subdivisions 2.4.23(b)(2)(i) and (ii).
- 2.4.23(b)(2)(i)** The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit’s potential to emit.
- 2.4.23(b)(2)(ii)** An emissions unit’s potential to emit shall be determined using the definition in Paragraph 2.4.2(d), except that the words “or enforceable as a practical matter” should be added after “enforceable.”
- 2.4.23(b)(3)** “Small emissions unit” means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in Paragraph 2.4.2(w) or in the Clean Air Act, whichever is lower.
- 2.4.23(b)(4)** “Major emissions unit” means:
- 2.4.23(b)(4)(i)** Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant, other than GHG as CO₂e, in an attainment area, or
- 2.4.23(b)(4)(ii)** Any emissions unit that meets the criteria listed in 2.4.23(b)(4)(i) and has the potential to emit 100,000 tons per year or more of GHG as CO₂e.
- 2.4.23(b)(5)** “Plantwide applicability limitation (PAL)” means an emission limitation expressed in tons per year, for a pollutant at a major stationary source, that is enforceable as a practical matter and established source-wide in accordance with Paragraphs 2.4.23(a) through (o).
- 2.4.23(b)(6)** “PAL effective date” generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
- 2.4.23(b)(7)** “PAL effective period” means the period beginning with the PAL effective date and ending 10 years later.
- 2.4.23(b)(8)** “PAL major modification” means, notwithstanding Paragraphs 2.4.2(b) and 2.4.2(c) (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.
- 2.4.23(b)(9)** “PAL permit” means the major NSR permit, the minor NSR permit, or the title V permit issued by the Health Officer that establishes a PAL for a major stationary source.
- 2.4.23(b)(10)** “PAL pollutant” means the pollutant for which a PAL is established at a major stationary source.
- 2.4.23(b)(11)** “Significant emissions unit” means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in Paragraph 2.4.2(w) or in the Clean Air Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in Subparagraph 2.4.23(b)(4).
- 2.4.23(c)** Permit application requirements. As part of a permit application requesting a PAL, the owner or operator of a major stationary source shall submit the following information to the Health Officer for approval:
- 2.4.23(c)(1)** A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.
- 2.4.23(c)(2)** Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup and shutdown.

- 2.4.23(c)(3)** The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by subparagraph 2.4.23(m)(1).
- 2.4.23(d)** General requirements for establishing PALs.
- 2.4.23(d)(1)** The Health Officer is allowed to establish a PAL at a major stationary source, provided that at a minimum, the requirements in subdivisions 2.4.23(d)(1)(i) through (vii) are met.
- 2.4.23(d)(1)(i)** The PAL shall impose an annual emission limitation in tons per year, that is enforceable as a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month total, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.
- 2.4.23(d)(1)(ii)** The PAL shall be established in a PAL permit that meets the public participation requirements in Paragraph 2.4.23(e).
- 2.4.23(d)(1)(iii)** The PAL permit shall contain all the requirements of Paragraph 2.4.23(g).
- 2.4.23(d)(1)(iv)** The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source.
- 2.4.23(d)(1)(v)** Each PAL shall regulate emissions of only one pollutant.
- 2.4.23(d)(1)(vi)** Each PAL shall have a PAL effective period of 10 years.
- 2.4.23(d)(1)(vii)** The owner or operator of the major stationary source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in Paragraphs 2.4.23(l) through (n) for each emissions unit under the PAL through the PAL effective period.
- 2.4.23(d)(2)** At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under Part 2.5 unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.
- 2.4.23(e)** Public participation requirements for PALs. PALs for existing major stationary sources shall be established, renewed, or increased through a procedure that is consistent with those of Section 2.4.16 and 40 CFR §§51.160 and 51.161. This includes the requirement that the Health Officer provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The Health Officer must address all material comments before taking final action on the permit.
- 2.4.23(f)** Setting the 10-year actuals PAL level. The actuals PAL level for a major stationary source shall be established as the sum of the baseline actual emissions (as defined in Paragraph 2.4.2(uu)) of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under Paragraph 2.4.2(w) or under the Clean Air Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shutdown after this 24-month period must be subtracted from the PAL level. Emissions from newly constructed units (which do not include modifications to existing units) on which actual construction began after the beginning of the 24-month period must be added to the PAL level in an amount equal to the potential to emit of the unit if the unit began operation less than 24 months prior to the submittal of the PAL application. The Health Officer shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the Health Officer is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_x to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).
- 2.4.23(g)** Contents of the PAL permit. The PAL permit must contain, at a minimum, the information in subparagraphs 2.4.23(g)(1) through 2.4.23(g)(10).

- 2.4.23(g)(1)** The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- 2.4.23(g)(2)** The PAL permit effective date and the expiration date of the PAL (PAL effective period).
- 2.4.23(g)(3)** Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with Paragraph 2.4.23(j) before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the Health Officer.
- 2.4.23(g)(4)** A requirement that emission calculations for compliance purposes must include emissions from startups, and shutdowns.
- 2.4.23(g)(5)** A requirement that, once the PAL expires, the major stationary source is subject to the requirements of subparagraph 2.4.23(i).
- 2.4.23(g)(6)** The calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total as required by Subparagraph 2.4.23(m)(1).
- 2.4.23(g)(7)** A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions under Paragraph 2.4.23(l).
- 2.4.23(g)(8)** A requirement to retain the records required under Paragraph 2.4.23(m) on site. Such records may be retained in an electronic format.
- 2.4.23(g)(9)** A requirement to submit the reports required under Paragraph 2.4.23(n) by the required deadlines.
- 2.4.23(g)(10)** Any other requirements that the Health Officer deems necessary to implement and enforce the PAL.
- 2.4.23(h)** PAL effective period and reopening of the PAL permit. The requirements in Subparagraphs 2.4.23(h)(1) and (2) apply to actuals PALs.
- 2.4.23(h)(1)** PAL effective period. The Health Officer shall specify a PAL effective period of 10 years.
- 2.4.23(h)(2)** Reopening of the PAL permit.
- 2.4.23(h)(2)(i)** During the PAL effective period, the Health Officer must reopen the PAL permit to:
 - 2.4.23(h)(2)(i)(A)** Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;
 - 2.4.23(h)(2)(i)(B)** Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under Part 2.5; and
 - 2.4.23(h)(2)(i)(C)** Revise the PAL to reflect an increase in the PAL as provided under Paragraph 2.4.23(k).
- 2.4.23(h)(2)(ii)** The Health Officer shall have discretion to reopen the PAL permit for the following:
 - 2.4.23(h)(2)(ii)(A)** Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;
 - 2.4.23(h)(2)(ii)(B)** Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and is required by these regulations; and
 - 2.4.23(h)(2)(ii)(C)** Reduce the PAL if the Health Officer determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on a published air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.
- 2.4.23(h)(2)(iii)** Except for the permit reopening in Clause 2.4.23(h)(2)(i)(A) for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of Paragraph 2.4.23(e).
- 2.4.23(i)** Expiration of a PAL. Any PAL that is not renewed in accordance with the procedures in Paragraph 2.4.23(j) shall expire at the end of the PAL effective period, and the requirements in Subparagraphs 2.4.23(i)(1) through (5) shall apply.

- 2.4.23(i)(1)** Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in Subdivision 2.4.23(i)(1)(i) and (ii).
- 2.4.23(i)(1)(i)** Within the time frame specified for PAL renewals in Subparagraph 2.4.23(j)(2), the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the Health Officer) by distributing the PAL allowable emissions for the major stationary source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under Subparagraph 2.4.23(j)(5), such distribution shall be made as if the PAL had been adjusted.
- 2.4.23(i)(1)(ii)** The Health Officer shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Health Officer determines is appropriate.
- 2.4.23(i)(2)** Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The Health Officer may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS, or CPMS to demonstrate compliance with the allowable emission limitation.
- 2.4.23(i)(3)** Until the Health Officer issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under Subdivision 2.4.23(i)(1)(ii), the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.
- 2.4.23(i)(4)** Any physical change or change in the method of operation at the major stationary source will be subject to major NSR requirements if such change meets the definition of major modification in Paragraph 2.4.2(b).
- 2.4.23(i)(5)** The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, synthetic minor limit, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to 2.4.17(c), but were eliminated by the PAL in accordance with the provisions in 2.4.23(a)(2)(iii).
- 2.4.23(j)** Renewal of a PAL.
- 2.4.23(j)(1)** The Health Officer shall follow the procedures specified in subparagraph 2.4.23(e) in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the Health Officer.
- 2.4.23(j)(2)** Application deadline. A major stationary source owner or operator shall submit a timely application to the Health Officer to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.
- 2.4.23(j)(3)** Application requirements. The application to renew a PAL permit shall contain the information required in Subdivisions 2.4.23(j)(3)(i) through (iv).
- 2.4.23(j)(3)(i)** The information required in Subparagraphs 2.4.23(c)(1) through (3).
- 2.4.23(j)(3)(ii)** A proposed PAL level.
- 2.4.23(j)(3)(iii)** The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).
- 2.4.23(j)(3)(iv)** Any other information the owner or operator wishes the Health Officer to consider in determining the appropriate level for renewing the PAL.
- 2.4.23(j)(4)** PAL adjustment. In determining whether and how to adjust the PAL, the Health Officer shall consider the options outlined in Subdivisions 2.4.23(j)(4)(i) and (ii). However, in no case may any such adjustment fail to comply with Subdivision 2.4.23(j)(4)(iii).

- 2.4.23(j)(4)(i)** If the emissions level calculated in accordance with subparagraph 2.4.23(f) is equal to or greater than 80 percent of the PAL level, the Health Officer may renew the PAL at the same level without considering the factors set forth in Subdivision 2.4.23(j)(4)(ii); or
- 2.4.23(j)(4)(ii)** The Health Officer may set the PAL at a level that he or she determines to be more representative of the source's baseline actual emissions, or that he or she determines to be more appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Health Officer in his or her written rationale.
- 2.4.23(j)(4)(iii)** Notwithstanding Subdivisions 2.4.23(j)(4)(i) and (ii):
- 2.4.23(j)(4)(iii)(A)** If the potential to emit of the major stationary source is less than the PAL, the Health Officer shall adjust the PAL to a level no greater than the potential to emit of the source; and
- 2.4.23(j)(4)(iii)(B)** The Health Officer shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of Paragraph 2.4.23(k) (increasing a PAL).
- 2.4.23(j)(5)** If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Health Officer has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.
- 2.4.23(k)** Increasing a PAL during the PAL effective period.
- 2.4.23(k)(1)** The Health Officer may increase a PAL emission limitation only if the major stationary source complies with the provisions in subparagraphs 2.4.23(k)(1)(i) through (iv).
- 2.4.23(k)(1)(i)** The owner or operator of the major stationary source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL.
- 2.4.23(k)(1)(ii)** As part of this application, the major stationary source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.
- 2.4.23(k)(1)(iii)** The owner or operator obtains a major NSR permit for all emissions unit(s) identified in Subdivision 2.4.23(k)(1)(i), regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT), even though they have also become subject to the PAL or continue to be subject to the PAL.
- 2.4.23(k)(1)(iv)** The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
- 2.4.23(k)(2)** The Health Officer shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with Subdivision 2.4.23(k)(1)(ii)), plus the sum of the baseline actual emissions of the small emissions units.
- 2.4.23(k)(3)** The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of Paragraph 2.4.23(e).
- 2.4.23(l)** Monitoring requirements for PALs.
- 2.4.23(l)(1)** General requirements.

- 2.4.23(l)(1)(i)** Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.
- 2.4.23(l)(1)(ii)** The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in Subdivisions 2.4.23(l)(2)(i) through (iv) and must be approved by the Health Officer.
- 2.4.23(l)(1)(iii)** Notwithstanding Subdivision 2.4.23(l)(1)(ii), an alternative monitoring approach that meets Subdivision 2.4.23(l)(1)(i) may be employed if approved by the Health Officer.
- 2.4.23(l)(1)(iv)** Failure to use a monitoring system that meets the requirements of this Rule renders the PAL invalid.
- 2.4.23(l)(2)** Minimum performance requirements for approved monitoring approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in Subparagraphs 2.4.23(l)(3) through (9):
 - 2.4.23(l)(2)(i)** Mass balance calculations for activities using coatings or solvents;
 - 2.4.23(l)(2)(ii)** CEMS;
 - 2.4.23(l)(2)(iii)** CPMS or PEMS; and
 - 2.4.23(l)(2)(iv)** Emission factors.
- 2.4.23(l)(3)** Mass balance calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:
 - 2.4.23(l)(3)(i)** Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;
 - 2.4.23(l)(3)(ii)** Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and
 - 2.4.23(l)(3)(iii)** Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Health Officer determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- 2.4.23(l)(4)** CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - 2.4.23(l)(4)(i)** CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and
 - 2.4.23(l)(4)(ii)** CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating.
- 2.4.23(l)(5)** CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - 2.4.23(l)(5)(i)** The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and
 - 2.4.23(l)(5)(ii)** Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Health Officer, while the emissions unit is operating.
- 2.4.23(l)(6)** Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
 - 2.4.23(l)(6)(i)** All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
 - 2.4.23(l)(6)(ii)** The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and

- 2.4.23(l)(6)(iii)** If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Health Officer determines that testing is not required.
- 2.4.23(l)(7)** A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.
- 2.4.23(l)(8)** Notwithstanding the requirements in Subparagraphs 2.4.23(l)(3) through (7), where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the Health Officer shall, at the time of permit issuance:
- 2.4.23(l)(8)(i)** Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or
- 2.4.23(l)(8)(ii)** Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.
- 2.4.23(l)(9)** Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the Health Officer. Such testing must occur at least once every 5 years after issuance of the PAL.
- 2.4.23(m)** Recordkeeping requirements.
- 2.4.23(m)(1)** The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of Section 2.4.23 and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.
- 2.4.23(m)(2)** The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus 5 years:
- 2.4.23(m)(2)(i)** A copy of the PAL permit application and any applications for revisions to the PAL; and
- 2.4.23(m)(2)(ii)** Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.
- 2.4.23(n)** Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Health Officer in accordance with the applicable title V operating permit. The reports shall meet the requirements in Subparagraphs 2.4.23(n)(1) through (3).
- 2.4.23(n)(1)** Semi-annual report. This report shall contain the information required in Subdivisions (23)(n)(1)(i) through (vii) and shall be submitted to the Department within 30 days of the end of each reporting period.
- 2.4.23(n)(1)(i)** The identification of owner and operator and the permit number.
- 2.4.23(n)(1)(ii)** Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to Subparagraph 2.4.23(m)(1).
- 2.4.23(n)(1)(iii)** All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
- 2.4.23(n)(1)(iv)** A list of any emissions units modified or added to the major stationary source during the preceding 6-month period.
- 2.4.23(n)(1)(v)** The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
- 2.4.23(n)(1)(vi)** A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by Subparagraph 2.4.23(l)(7).

- 2.4.23(n)(1)(vii)** A signed statement by a responsible official (as defined in Chapter 18 of these Regulations) certifying the truth, accuracy, and completeness of the information provided in the report.
- 2.4.23(n)(2)** Deviation report. The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to 18.5.3(c)(2) shall satisfy this reporting requirement. The reports shall contain the following information:
- 2.4.23(n)(2)(i)** The identification of owner and operator and the permit number;
- 2.4.23(n)(2)(ii)** The PAL requirement that experienced the deviation or that was exceeded;
- 2.4.23(n)(2)(iii)** Emissions resulting from the deviation or the exceedance; and
- 2.4.23(n)(2)(iv)** A signed statement by a responsible official (as defined in Chapter 18 of these Regulations) certifying the truth, accuracy, and completeness of the information provided in the report.
- 2.4.23(n)(3)** Re-validation results. The owner or operator shall submit to the Health Officer the results of any re-validation test or method within 3 months after completion of such test or method.
- 2.4.23(o)** Transition requirements.
- 2.4.23(o)(1)** The Health Officer may not issue a PAL that does not comply with the requirements in Paragraphs 2.4.23(a) through (o) after the effective date of Section 2.4.23.
- 2.4.23(o)(2)** The Health Officer may supersede any PAL that was established prior to the effective date Section 2.4.23 with a PAL that complies with the requirements of Paragraphs 2.4.23(a) through (o).
- 2.4.24** If any provision of Part 2.4, or the application of such provision to any person or circumstance, is held invalid, the remainder of this Rule, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

2.5 Air Permits Authorizing Construction In Or Near Nonattainment Areas.

2.5.1 Applicability.

- 2.5.1(a)** The requirements of Part 2.5 apply to the construction of any new major stationary source (as defined in Paragraph 2.5.2(a)) or any project at an existing major stationary source in or near an area designated as nonattainment under §107(d)(1)(A)(i) of the Clean Air Act for which the source or modification is major for the pollutant or its precursors for which the area is designated as nonattainment. If the source is not major for the pollutant or its precursors for which the area is designated as nonattainment, it shall comply with the requirements of Part 2.4 which would be applicable if the area were classified as attainment or unclassifiable under §§107(d)(1)(A)(ii) or (iii) of the Clean Air Act.
- 2.5.1(b)** The requirements of Sections 2.5.3 through Paragraph 2.5.17 rule apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as this rule otherwise provides.
- 2.5.1(c)** No new major stationary source or major modification to which the requirements of Sections 2.5.3 through 2.5.17(c) apply shall begin construction without a permit that states that the major stationary source or major modification will meet those requirements.
- 2.5.1(d)** Except as otherwise provided in Paragraph 2.5.1(j), and consistent with the definition of major modification contained in Paragraph 2.5.2(b), a project is a major modification for a regulated NSR pollutant only if it causes two types of emissions increases – a significant emissions increase [as defined in Paragraph 2.5.2(mm)], and a significant net emissions increase [as defined in Paragraphs 2.5.2(c) and 2.5.2(w)].
- 2.5.1(e)** Before beginning actual construction, the procedure for calculating whether a significant emissions increase will occur depends upon the type of emissions units being modified, according to Paragraphs 2.5.1(f) through 2.5.1(i). The procedure for calculating whether a significant net emissions increase will occur at the major stationary source is contained in the definition in Paragraphs 2.5.2(c) and 2.5.2(w). Regardless of any such preconstruction projections, a major modification can result only if the project causes a significant emissions increase and a significant net emissions increase.

- 2.5.1(f)** Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference(s) between the projected actual emissions [as defined in Paragraph 2.5.2(nn)] and the baseline actual emissions [as defined in Subparagraphs 2.5.2(uu)(1) and (2)], for each existing emissions unit, equals or exceeds the significant rate for that pollutant [as defined in Paragraph 2.5.2(w)].
- 2.5.1(g)** Actual-to-potential test for projects that only involve construction of a new emissions unit(s). A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit [as defined in Paragraph 2.5.2(d)] from each new emissions unit following completion of the project and the baseline actual emissions [as defined in Subparagraph 2.5.2 (uu)(3)] of these units before the project equals or exceeds the significant rate for that pollutant [as defined in Paragraph 2.5.2 (w)].
- 2.5.1(h)** Actual-to-potential test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference(s) between the potential to emit [as defined in Paragraph 2.5.2(d)] and the actual emissions [as defined in Paragraph 2.5.2(u)], for each existing emissions unit, equals or exceeds the significant rate for that pollutant [as defined in Paragraph 2.5.2(w)].
- 2.5.1(i)** Hybrid test for projects that involve multiple types of emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in Paragraphs 2.5.1(f) through 2.5.1(h) as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant rate for that pollutant [as defined in Paragraph 2.5.2(w)].
- 2.5.1(j)** Any major stationary source subject to a plantwide applicability limit (PAL), as defined in Subparagraph 2.5.23(b)(5), for a regulated NSR pollutant shall comply with the requirements under Section 2.5.23.
- 2.5.1(k)** The fugitive emissions of a stationary source shall not be included in determining for any purposes of this Rule whether it is a major stationary source or major modification unless the source belongs to one of the following categories of stationary sources:
- 2.5.1(k)(1)** Coal cleaning plants (with Thermal dryers);
 - 2.5.1(k)(2)** Kraft pulp mills;
 - 2.5.1(k)(3)** Portland cement plants;
 - 2.5.1(k)(4)** Primary zinc smelters;
 - 2.5.1(k)(5)** Iron and steel mills;
 - 2.5.1(k)(6)** Primary aluminum ore reduction plants;
 - 2.5.1(k)(7)** Primary copper smelters;
 - 2.5.1(k)(8)** Municipal incinerators capable of charging more than 250 tons of refuse per day;
 - 2.5.1(k)(9)** Hydrofluoric, sulfuric, or nitric acid plants;
 - 2.5.1(k)(10)** Petroleum refineries;
 - 2.5.1(k)(11)** Lime plants;
 - 2.5.1(k)(12)** Phosphate rock processing plants;
 - 2.5.1(k)(13)** Coke oven batteries;
 - 2.5.1(k)(14)** Sulfur recovery plants;
 - 2.5.1(k)(15)** Carbon black plants (furnace process);
 - 2.5.1(k)(16)** Primary lead smelters;
 - 2.5.1(k)(17)** Fuel conversion plants;
 - 2.5.1(k)(18)** Sintering plants;
 - 2.5.1(k)(19)** Secondary metal production plants;

- 2.5.1(k)(20)** Chemical processing plants (excluding ethanol production facilities that produce ethanol by natural fermentation);
- 2.5.1(k)(21)** Fossil fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour of heat input;
- 2.5.1(k)(22)** Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- 2.5.1(k)(23)** Taconite ore processing plants;
- 2.5.1(k)(24)** Glass fiber processing plants;
- 2.5.1(k)(25)** Charcoal production plants;
- 2.5.1(k)(26)** Fossil fuel fired steam electric plants of more than 250 British thermal units per hour heat input; and
- 2.5.1(k)(27)** Any other stationary source category which, as of August 7, 1980, is being regulated under §111 or 112 of the Clean Air Act.

2.5.2 Definitions. For the purposes of this Rule only, the following terms will have meanings ascribed in this section:

2.5.2(a) "Major Stationary Source" shall mean:

2.5.2(a)(1) Any stationary source [see Paragraph 2.5.2(e)] that emits, or has the potential to emit [see Paragraph 2.5.2(d)] air pollutants at or above one or more of the following applicable thresholds:

Nonattainment Area Classification	NO _x	VOC	CO	SO ₂	PM ₁₀	PM _{2.5}
	<i>All values expressed in tons per year (tpy)</i>					
Ozone: Marginal and Moderate	100	100				
Ozone: Serious	50	50				
Ozone: Severe	25	25				
Ozone: Extreme	10	10				
CO: Other than Serious			100			
CO: Serious, where stationary sources do NOT contribute significantly to CO levels			100			
CO: Serious, where stationary sources do contribute significantly to CO levels			50			
PM ₁₀ : Other than Serious					100	
PM ₁₀ : Serious					70	
PM _{2.5} : Other than Serious	100			100		100
PM _{2.5} : Serious	70			70		70
SO ₂				100		
NO _x	100					

2.5.2(a)(2) Any physical change that would occur at a stationary source not otherwise qualifying under this Rule as a major stationary source, if the changes would constitute a major stationary source by itself.

2.5.2(a)(3) A stationary source that is considered major for VOC or NO_x shall be considered major for ozone.

2.5.2(b) "Major Modification" shall mean any physical change in or change in the method of operation of a major stationary source that would result in a significant [see Paragraph 2.5.2(w)] net emissions increase [see Paragraph 2.5.2(c)] of any regulated NSR pollutant.

2.5.2(b)(1) Any net emissions increase that is significant for VOC or NO_x shall be considered significant for ozone.

2.5.2(b)(2) A physical change or change in the method of operation shall not include:

2.5.2(b)(2)(i) Routine maintenance, repair and replacement;

- 2.5.2(b)(2)(ii)** Use of an alternative fuel or raw material by reason of an order under §§2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (P.L. 93-319, 15 U.S.C. 791 note) or any superseding legislation, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act (June 10, 1920, P.L. 280, 16 U.S.C. 791a);
- 2.5.2(b)(2)(iii)** Use of an alternative fuel by reason of an order or rule under §125 of the CAA;
- 2.5.2(b)(2)(iv)** Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- 2.5.2(b)(2)(v)** Use of an alternative fuel or raw material by a stationary source which:
- 2.5.2(b)(2)(v)(A)** The source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any enforceable permit condition which was established after December 21, 1976; or
- 2.5.2(b)(2)(v)(B)** The source is approved to use under any permit issued under the Federal Prevention of Significant Deterioration ("PSD") regulations (40 CFR 52.21) or under regulations of this Chapter 2;
- 2.5.2(b)(2)(vi)** An increase in the hours of operation or in the production rate, unless such change would be prohibited under any enforceable permit condition which was established after December 21, 1976.
- 2.5.2(b)(2)(vii)** Any change in ownership at a stationary source.
- 2.5.2(b)(2)(viii)** Reserved.
- 2.5.2(b)(2)(ix)** The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- 2.5.2(b)(3)** This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under Section 2.5.23 for a PAL for that pollutant. Instead, the definition at Subparagraph 2.5.23(b)(8) shall apply.
- 2.5.2(c)** "Net Emissions Increase" shall mean with respect to any regulated NSR pollutant, the amount by which the sum of the following exceeds zero:
- 2.5.2(c)(1)** Any increase in emissions as calculated pursuant to Paragraphs 2.5.1(e) through (i) from a particular physical change or change in method of operation at a stationary source; and
- 2.5.2(c)(2)** Any other increases and decreases in actual emissions at a major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this subparagraph shall be determined as provided in Paragraph 2.5.2(uu), except that Subdivisions 2.5.2(uu)(1)(iii) and 2.5.2(uu)(2)(iv) shall not apply.
- 2.5.2(c)(2)(i)** An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
- 2.5.2(c)(2)(i)(A)** The date up to five (5) years before construction [see Paragraph 2.5.2(h)] on the particular change commences [see Paragraph 2.5.2(i)]; and
- 2.5.2(c)(2)(i)(B)** The date that the increase from the particular change occurs.
- 2.5.2(c)(2)(ii)** An increase or decrease in actual emissions is creditable only if the Health Officer has not relied on it in issuing a permit for the source under Part 2.5, which is in effect when the increase in actual emissions from the particular change occurs.
- 2.5.2(c)(2)(iii)** With respect to particulate matter, only PM₁₀ and PM_{2.5} emissions can be used to evaluate the net emissions increase for PM₁₀. Only PM_{2.5} emissions can be used to evaluate the net emissions increase for PM_{2.5}.
- 2.5.2(c)(2)(iv)** An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- 2.5.2(c)(2)(v)** A decrease in actual emissions is creditable only to the extent that:
- 2.5.2(c)(2)(v)(A)** The old level of actual emissions or the old level of allowable emissions [see Paragraph 2.5.2(p)], whichever is lower, exceeds the new level of actual emissions;

- 2.5.2(c)(2)(v)(B)** It is enforceable [see Paragraph 2.5.2(q)], at and after the time that actual construction on the particular change begins;
- 2.5.2(c)(2)(v)(C)** It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change, and
- 2.5.2(c)(2)(v)(D)** The Health Officer has not relied upon the decrease in demonstrating attainment or reasonable further progress.
- 2.5.2(c)(2)(vi)** An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- 2.5.2(c)(3)** Fugitive emission increases and decreases are not creditable for those emissions units located at a facility whose primary activity is not listed in Paragraph 2.5.1(k) and for which the unit, itself, is not part of a listed source category in Paragraph 2.5.1(k).
- 2.5.2(d)** "Potential to Emit" shall mean the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Secondary emissions as defined in Paragraph 2.5.2(r) do not count in determining the potential to emit of a stationary source.
- 2.5.2(e)** "Stationary Source" shall mean any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.
- 2.5.2(f)** "Building, Structure, Facility, or Installation" shall mean all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., all have the same two digit code) as described in the Standard Industrial Classification Manual.
- 2.5.2(f)(1)** Notwithstanding the provisions of 2.5.2(f), building, structure, facility, or installation means, for onshore activities under SIC Major Group 13: Oil and Gas Extraction, all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites that are located within 1/4 mile of one another (measured from the center of the equipment on the surface site) and they share equipment. Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices. Surface site, as used here, means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.
- 2.5.2(g)** "Emissions Unit" shall mean any part of a stationary source which emits or would have the potential to emit any regulated NSR pollutant including an electric utility steam generating unit as defined in Paragraph 2.5.2(vv). For purposes of Part 2.5, there are two types of emissions units as described in Subparagraphs 2.5.2(g)(1) and (2).
- 2.5.2(g)(1)** A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.
- 2.5.2(g)(2)** An existing emissions unit is any emissions unit that does not meet the requirements in Subparagraph 2.5.2(g)(1).
- 2.5.2(h)** "Construction" shall mean any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in emissions.
- 2.5.2(i)** "Commence" as applied to construction of a major stationary source or major modification shall mean that the owner or operator has all necessary preconstruction approvals or permits [see Paragraph 2.5.2(j)] and either has:
- 2.5.2(i)(1)** Begun, or caused to begin, a continuous program of actual on-site construction [see Paragraph 2.5.2(k)] of the source, to be completed within a reasonable time; or

- 2.5.2(i)(2)** Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.
- 2.5.2(j)** "Necessary Preconstruction Approvals or Permits" shall mean those permits or approvals required under Alabama air quality control laws and regulations which are part of the State Implementation Plan.
- 2.5.2(k)** "Begin Actual Construction" shall mean, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework, and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.
- 2.5.2(l)** "Best Available Control Technology (BACT)" shall mean an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the Health Officer, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of BACT result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 or 61. If the Health Officer determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results.
- 2.5.2(m)** "Lowest achievable emission rate" (LAER) shall mean, for any source, the more stringent rate of emissions based on the following:
- 2.5.2(m)(1)** The most stringent emissions limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
- 2.5.2(m)(2)** The most stringent emissions limitation which is achieved in practice by such class or category of stationary sources. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within a stationary source. In no event shall the application of the term allow a new or modified stationary source to emit any pollutant in excess of the amount allowable under an applicable new source standard of performance.
- 2.5.2(n)** Reserved.
- 2.5.2(o)** Reserved.
- 2.5.2(p)** "Allowable Emissions" shall mean the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to enforceable limits which restrict the operating rate, the hours of operation, or both) and the most stringent of the following:
- 2.5.2(p)(1)** The applicable standards as set forth in 40 CFR Parts 60, 61, or 63;
- 2.5.2(p)(2)** The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or
- 2.5.2(p)(3)** The emissions rate specified as an enforceable permit condition, including those with a future compliance date.
- 2.5.2(q)** "Enforceable" shall mean all limitations and conditions which are enforceable, including those requirements developed pursuant to 40 CFR Parts 60, 61, and 63, requirements within the State Implementation Plan, and any permit requirements established pursuant to Chapters 2, 17 or 18 of these regulations.
- 2.5.2(r)** "Secondary Emissions" shall mean emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purpose of Part 2.5, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any off-site support facility which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major stationary source or major

modification. Secondary emissions do not include any emissions which come directly from a mobile source such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

- 2.5.2(s)** "Innovative Control Technology" shall mean any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or non-air quality environmental impacts.
- 2.5.2(t)** "Fugitive Emissions" shall mean those emissions which could not reasonably pass through a stack, chimney, vent, roof monitor, or other functionally equivalent opening.
- 2.5.2(u)** "Actual Emissions" shall mean the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with Subparagraphs 2.5.2(u)(1) through 2.5.2(u)(3) below, except that this definition shall not apply for establishing a PAL under Section 2.5.23. Instead, Paragraphs 2.5.2(nn) and 2.5.2(uu) shall apply for this purpose.
- 2.5.2(u)(1)** In general, actual emissions as of any given date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the given date and which is representative of normal source operation. The Health Officer shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
- 2.5.2(u)(2)** The Health Officer may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
- 2.5.2(u)(3)** For any emissions unit which has not begun normal operations on the given date as determined in Subparagraph 2.5.2(u)(1) above, actual emissions shall equal the potential to emit of the unit on that date.
- 2.5.2(v)** "Complete" shall mean, in reference to an application for a permit, that the application contains all of the information necessary for processing the application.
- 2.5.2(w)** "Significant" shall mean, in reference to an emissions increase or a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant	Emissions Rate (tons per year)
Carbon Monoxide: Marginal and Moderate Nonattainment Areas	100
CO: Serious Nonattainment Areas	50 ³
Nitrogen Oxides	40
Sulfur Dioxide	40
PM ₁₀	15
PM _{2.5}	10 (of direct PM _{2.5}) 40 (of SO ₂ or NO _x)
Ozone: Marginal and Moderate Nonattainment Areas	40 (of VOC or NO _x)
Ozone: Serious and Severe Nonattainment Areas	25 (of VOC or NO _x)
Ozone: Extreme Nonattainment Areas	ANY (VOC or NO _x)
Lead	0.6

- 2.5.2(x)** "Federal Land Manager" shall mean, with respect to any lands in the United States, the Secretary of the department with authority over such lands.
- 2.5.2(y)** "Nonattainment Area" shall mean any area designated by EPA as nonattainment for any national ambient air quality standard under Subpart C of 40 CFR §81.301.

³ The significant emission rate of 50 tons for carbon monoxide in serious nonattainment areas shall only apply if the Health Officer has made a determination that stationary sources significantly contribute to the carbon monoxide levels in the areas.

- 2.5.2(z)** Reserved.
- 2.5.2(aa)** Reserved.
- 2.5.2(bb)** Reserved.
- 2.5.2(cc)** Reserved.
- 2.5.2(dd)** Reserved.
- 2.5.2(ee)** Reserved.
- 2.5.2(ff)** Reserved.
- 2.5.2(gg)** "Pollution Prevention Projects" shall mean any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal. It does not mean recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.
- 2.5.2(hh)** "Clean coal technology" shall mean any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- 2.5.2(ii)** "Clean coal technology demonstration project" shall mean a project using funds appropriated under the heading "Department of Energy-Clean Coal Technology", up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- 2.5.2(jj)** "Temporary clean coal technology demonstration project" shall mean a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State Implementation Plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- 2.5.2(kk)** "Repowering" shall mean replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
- 2.5.2(kk)(1)** Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
- 2.5.2(ll)** Reserved.
- 2.5.2(mm)** "Significant emissions increase" shall mean, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in Paragraph 2.5.2(w)) for that pollutant.
- 2.5.2(nn)** "Projected actual emissions" shall mean
- 2.5.2(nn)(1)** the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (consecutive 12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.
- 2.5.2(nn)(2)** In determining the projected actual emissions under Subparagraph 2.5.2(nn)(1) (before beginning actual construction), the owner or operator of the major stationary source:
- 2.5.2(nn)(2)(i)** Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of

business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under these regulations; and

- 2.5.2(nn)(2)(ii)** Shall include fugitive emissions to the extent quantifiable, if appropriate under Paragraph 2.5.1(k), and emissions associated with startups and-shutdowns; and
- 2.5.2(nn)(2)(iii)** Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under Paragraph 2.5.2(uu) and that are not resulting from the particular project, including any increased utilization due to product demand growth; or
- 2.5.2(nn)(2)(iv)** In lieu of using the method set out in Subdivisions 2.5.2(nn)(2)(i) through (iii), may elect to use the emissions unit's potential to emit, in tons per year, as defined under Paragraph 2.5.2(d).
- 2.5.2(oo)** "Nonattainment Major new source review (NSR) program" shall mean the preconstruction permit program in Part 2.5. Any permit issued under this program is a major NSR permit.
- 2.5.2(pp)** "Prevention of Significant Deterioration (PSD) program" shall mean the preconstruction permit program in Part 2.4. Any permit issued under this program is a major NSR permit.
- 2.5.2(qq)** "Continuous emissions monitoring system (CEMS)" shall mean all of the equipment that may be required to meet the data acquisition and availability requirements of Part 2.5, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.
- 2.5.2(rr)** "Predictive emissions monitoring system (PEMS)" shall mean all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.
- 2.5.2(ss)** "Continuous parameter monitoring system (CPMS)" shall mean all of the equipment necessary to meet the data acquisition and availability requirements of Part 2.5, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and to record average operational parameter value(s) on a continuous basis.
- 2.5.2(tt)** "Continuous emissions rate monitoring system (CERMS)" shall mean the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).
- 2.5.2(uu)** "Baseline actual emissions" shall mean the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with Subparagraphs 2.5.2(uu)(1) through (4).
- 2.5.2(uu)(1)** For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The Health Officer may allow the use of a different time period upon a determination that it is more representative of normal source operation.
- 2.5.2(uu)(1)(i)** The average rate shall include fugitive emissions to the extent quantifiable, if appropriate under Paragraph 2.5.1(k), and emissions associated with startups and-shutdowns.
- 2.5.2(uu)(1)(ii)** The average rate shall be adjusted downward to exclude any noncompliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.
- 2.5.2(uu)(1)(iii)** For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
- 2.5.2(uu)(1)(iv)** The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Subdivision 2.5.2(uu)(1)(ii).
- 2.5.2(uu)(2)** For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any

consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Department for a permit required under this Rule, whichever is earlier.

- 2.5.2(uu)(2)(i)** The average rate shall include fugitive emissions to the extent quantifiable, if appropriate under Paragraph 2.5.1(k), and emissions associated with startups and shutdowns.
- 2.5.2(uu)(2)(ii)** The average rate shall be adjusted downward to exclude any noncompliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
- 2.5.2(uu)(2)(iii)** The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under 40 CFR part 63, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of 40 CFR§51.165(a)(3)(ii)(G).
- 2.5.2(uu)(2)(iv)** For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
- 2.5.2(uu)(2)(v)** The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by Subdivisions 2.5.2(uu)(2)(ii) and (iii).
- 2.5.2(uu)(3)** For a new emissions unit, as defined in Subparagraph 2.5.2(g)(1), the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero. During the first two years from the date which the emissions unit commenced operation, the baseline actual emissions shall equal the potential to emit for the unit. Thereafter, the unit will be considered an existing emissions unit and the baseline actual emissions will be determined in accordance with Subparagraph 2.5.2(uu)(1) for an electric steam generating unit or Subparagraph 2.5.2(uu)(2) for other emissions units.
- 2.5.2(uu)(4)** For a PAL for a stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in Subparagraph 2.5.2(uu)(1), for other existing emissions units in accordance with the procedures contained in Subparagraph 2.5.2(uu)(2), and for a new emissions unit in accordance with the procedures contained in Subparagraph 2.5.2(uu)(3).
- 2.5.2(vv)** "Electric utility steam generating unit" shall mean any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
- 2.5.2(ww)** "Regulated NSR pollutant", for purposes of Part 2.5, shall mean the following:
- 2.5.2(ww)(1)** Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator of EPA (e.g., volatile organic compounds and NO_x are precursors for ozone);
- 2.5.2(ww)(2)** PM_{2.5} and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. Such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM_{2.5} and PM₁₀. Applicability determinations made prior to January 1, 2011 without accounting for condensable particulate matter shall not be considered invalid.
- 2.5.2(xx)** Reserved.
- 2.5.2(yy)** "Project" shall mean a physical change in, or change in the method of operation of, an existing major stationary source.
- 2.5.2(zz)** "Offset ratio" shall mean the ratio of total actual emissions reductions to total allowable emissions increases of such pollutant from the new source.

2.5.2(aaa) Reserved. (Effective on August 14, 2024.)

2.5.3 Permitting requirements. No Air Permit shall be issued for the construction of a new major source or the major modification of an existing source that is major for any pollutant or its precursors for which an area is nonattainment if the source or modification would be located in the nonattainment area or would be located outside the nonattainment area but have a significant impact on the nonattainment area unless the following conditions are met, as applicable:

2.5.3(a) The applicant demonstrates that the new source or the major modification would meet an emission limitation that would represent the lowest achievable emission rate (LAER) for that source or facility;

2.5.3(b) The applicant certifies that all existing major sources owned or operated by the applicant (or any entity controlling, controlled by, or under common control with that person) within the state of Alabama are in compliance with all applicable air emission limits or are on an acceptable compliance schedule; and

2.5.3(c) The applicant demonstrates that emission reductions from existing source(s) in the area of the proposed source/major modification (whether or not under the same ownership) meet the offset requirements of Section 2.5.4.

2.5.3(d) Alternative Sites Analysis. An analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification shall be required.

2.5.3(e) Requirements for sources located outside of a nonattainment area. Any new major stationary source or major modification undergoing a PSD permitting review near a nonattainment area which has a significant impact, as defined in Paragraph 2.5.2(aaa), on the nonattainment area shall either:

2.5.3(e)(1) Obtain offsets from within the nonattainment area in accordance with the requirements in Section 2.5.4, or

2.5.3(e)(2) Obtain emissions reductions in or near the nonattainment area which will, at a minimum, reduce the impact of the project to below the significant impact level. All emissions reductions must be calculated in accordance with the requirements in Section 2.5.4 and be enforceable.

2.5.3(f) The requirements of Part 2.5 shall apply to all pollutants for which a nonattainment area has been designated as nonattainment and all precursors for those pollutants.

2.5.3(g) Interpollutant trading may be utilized only for the purpose of satisfying offset requirements for PM_{2.5}. Emissions reductions may only be utilized once in determining allowable offsets, i.e. the same reductions in SO₂ may not be utilized to offset SO₂ increases and PM_{2.5} increases. Any offsets utilized in interpollutant offset trading must meet the requirements of Section 2.5.4. Interpollutant offsets shall be determined based upon the following ratios:

2.5.3(g)(1) 200 tons of NO_x to 1 ton of PM_{2.5},

2.5.3(g)(2) 1 ton of PM_{2.5} to 200 tons of NO_x,

2.5.3(g)(3) 40 tons of SO₂ to 1 ton of PM_{2.5},

2.5.3(g)(4) 1 ton of PM_{2.5} to 40 tons of SO₂.

2.5.3(h) Exemptions. Temporary emission sources, such as pilot plants and portable facilities which will be relocated outside of the nonattainment area after a short period of time, are exempt from the requirements of Paragraphs 2.5.3(c) through (e).

2.5.3(i) The total amount of increased emissions resulting from a major modification that must be offset, in tons per year, shall be determined by summing the difference between the allowable emissions after the modification, as defined in subparagraph 2.5.2(p), and the actual emissions before the modification, as defined in subparagraph 2.5.2(u), for each emissions unit.

2.5.4 Offset Standards.

2.5.4(a) Where the emissions limit under these regulations allows greater emissions than the potential to emit of the source, emissions offset credit will be allowed only for control below this potential;

2.5.4(b) For an existing fuel combustion source, credit shall be based on the allowable emissions under these regulations for the type of fuel being burned at the time the application to construct is filed. If the existing source commits to switch to a cleaner fuel at some future date, emissions offset credit based on the allowable (or actual) emissions for the

fuels involved is not acceptable, unless the permit is conditioned to require the use of a specified alternative control measure which would achieve the same degree of emissions reduction should the source switch back to a dirtier fuel at some later date.

- 2.5.4(c)** Emissions reductions achieved by shutting down an existing emission unit or curtailing production or operating hours may be generally credited for offsets if they meet the following requirements:
 - 2.5.4(c)(1)** Such reductions are surplus, permanent, quantifiable, and enforceable.
 - 2.5.4(c)(2)** The shutdown or curtailment occurred after the last day of the base year for the SIP planning process. For purposes of this section, the Health Officer may choose to consider a prior shutdown or curtailment to have occurred after the last day of the base year if the projected emissions inventory used to develop the attainment demonstration explicitly includes the emissions from such previously shutdown or curtailed emission units. No credit may be given for shutdowns that occurred before August 7, 1977.
- 2.5.4(d)** Emissions reductions achieved by shutting down an existing emissions unit or curtailing production or operating hours and that do not meet the requirements in paragraph 2.5.4(c)(2) of this section may be generally credited only if:
 - 2.5.4(d)(1)** The shutdown or curtailment occurred on or after the date the construction permit application is filed; or
 - 2.5.4(d)(2)** The applicant can establish that the proposed new emissions unit is a replacement for the shutdown or curtailed emissions unit, and the emissions reductions achieved by the shutdown or curtailment are surplus, permanent, quantifiable, and enforceable.
- 2.5.4(e)** No emissions credit may be allowed for replacing one hydrocarbon compound with another of lesser reactivity, except that emissions credit may be allowed for the replacement of those compounds listed as having negligible photochemical reactivity in 40 CFR 51.100(s).
- 2.5.4(f)** All emission reductions claimed as offset credit shall be federally enforceable;
- 2.5.4(g)** Credit for an emissions reduction can be claimed provided that the Department has not relied on it in issuing any permit under Part 2.4 or 2.5 or has not relied on it in a demonstration of attainment or reasonable further progress.
- 2.5.4(h)** If a designated nonattainment area is projected to be an attainment area as part of an approved SIP control strategy by the new source start-up date, offsets would not be required if the new source would not cause a new violation.
- 2.5.4(i)** Calculation of Emission Offsets.
 - 2.5.4(i)(1)** The following procedure shall be followed to calculate emission offsets:
 - 2.5.4(i)(1)(i)** The source shall calculate average annual actual emissions, in tons per year (tpy), before the emission reduction using data from the 24-month period immediately preceding the reduction in emissions. With the Health Officer's approval, the use of a different time period, not to exceed 10 years immediately preceding the reduction in emissions, may be allowed if the owner or operator of the source documents that such period is more representative of normal source operation, but not prior to the base year inventory date, which is the last day of the two years preceding the date of nonattainment designation; and
 - 2.5.4(i)(1)(ii)** The emission offsets created shall be calculated by subtracting the allowable emissions following the reduction from the average annual actual emissions prior to the reduction.
 - 2.5.4(i)(2)** For any emissions unit that has been operating for a consecutive period of at least 12 months but less than 24 months on the base year inventory date, based on the unit's potential to emit, emissions shall be calculated equal to the amount needed to complete a 24 month period on the base year inventory date. The baseline for determining credit for emission offsets of any source shall be the allowable emissions of said source or the actual emissions of said source, not including any malfunctions, whichever is less.
- 2.5.4(j)** Location of offsetting emissions. Emission offsets shall be obtained from sources currently operating within the same designated nonattainment area as the new or modified stationary source. Emission offsets may be obtained from another nonattainment area with the Health Officer's approval only if
 - 2.5.4(j)(1)** The other area has an equal or higher nonattainment classification than the area in which the proposed source is located; and

- 2.5.4(j)(2)** Emissions from the other area contribute to a violation of the NAAQS in the nonattainment area in which the source is located.
- 2.5.4(k)** Emission offsetting ratios. Emission offsets shall be required in nonattainment areas in accordance with the following provisions:
- 2.5.4(k)(1)** Emissions increases in carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and particulate matter (PM₁₀ and PM_{2.5}) nonattainment areas shall be offset at a ratio greater than 1 to 1.
- 2.5.4(k)(2)** Emissions increases in ozone nonattainment areas shall be offset for volatile organic compounds (VOC) and nitrogen oxides (NO_x) in accordance with the following:
- 2.5.4(k)(2)(i)** Marginal 1.1 to 1
- 2.5.4(k)(2)(ii)** Moderate 1.15 to 1
- 2.5.4(k)(2)(iii)** Serious 1.2 to 1
- 2.5.4(k)(2)(iv)** Severe 1.3 to 1
- 2.5.4(k)(2)(v)** Extreme 1.5 to 1
- 2.5.5** Banking of Emission Offsets. Offsets approved after January 16, 1979, which exceed the requirement of reasonable further progress may be "banked" for future use; likewise, reductions in emissions from existing sources which exceed the requirement of reasonable further progress may be "banked" for future use. The banking is subject to the following requirements:
- 2.5.5(a)** Application shall be made in writing to the Health Officer, describing the emission offsets to be banked, such description to include location, source, and type of emissions.
- 2.5.5(b)** Emission offsets cannot be banked beyond the allowable emissions of said source or the existing emissions of said source, not including any malfunctions, whichever is less.
- 2.5.5(c)** Upon approval by the Health Officer of said application, the banked emissions shall be credited to the facility submitting such application.
- 2.5.5(d)** No emission offsets banked in accordance with the provisions of this section shall be used unless written notice is provided to the Health Officer thirty (30) days prior to submission of the necessary permit applications, to provide opportunity for review of the proposed use of the banked emission offsets.
- 2.5.5(e)** In the event that a determination is made that the banked emission offsets may not be used for the proposed construction, written notice shall be afforded the applicant, as provided in Section 2.2.3, herein.
- 2.5.5(f)** In the event that a determination under Paragraph 2.5.5(e) is made by the Health Officer, construction may proceed if, and only if, emission offsets are obtained sufficient to satisfy the requirements of Section 2.5.4.
- 2.5.5(g)** Nothing contained in this Paragraph shall prohibit the transfer, assignment, sale, or otherwise complete disposition of said banked emission offsets, provided that written notice is provided to the Health Officer, thirty (30) days prior to such disposition, describing in detail the recipient of the banked emissions.
- 2.5.6** Area Classifications.
- 2.5.6(a)** The following area, which was in existence on August 7, 1977, shall be a Class I area and may not be redesignated:
- 2.5.6(a)(1)** The Sipsey Wilderness Area, located in Franklin, Winston, and Lawrence counties, Alabama.
- 2.5.6(b)** Any other area is initially designated Class II:
- 2.5.7** Air Quality Models.
- 2.5.7(a)** All estimates of ambient concentrations required under this Rule shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51, Appendix W, the "Guideline on Air Quality Models." (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711)
- 2.5.8** Reserved.
- 2.5.9** Control Technology Review.

- 2.5.9(a)** A major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable limitation standard and standard of performance under 40 CFR Parts 60, 61, and 63.
- 2.5.9(b)** A new major stationary source shall apply LAER for each regulated NSR pollutant and precursors that it would have the potential to emit in significant amounts for which the area is designated as nonattainment.
- 2.5.9(c)** A major modification shall apply LAER for each regulated NSR pollutant and precursors for which it would result in a significant net emissions increase for which the area is designated as nonattainment. This requirement applies to each emissions unit at which a net emissions increase in the pollutant or precursors would occur as a result of a physical change or change in the method of operation in the unit.
- 2.5.9(d)** For phased construction projects, the determination of LAER shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than eighteen (18) months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of LAER for the source.
- 2.5.10** Reserved.
- 2.5.11** Reserved.
- 2.5.12** Air Quality Monitoring.
- 2.5.12(a)** Post-construction Monitoring. The owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring as the Health Officer determines is necessary to determine the impact said source or modification may have, or is having, on air quality in any area.
- 2.5.12(b)** Operations of Monitoring Stations. The owner or operator of a major stationary source or major modification shall meet Federal monitoring quality assurance requirements during the operation of monitoring stations for purposes of satisfying paragraph 2.5.12.
- 2.5.12(c)** Visibility Monitoring. The Health Officer may require monitoring of visibility in any Federal Class I area near the proposed new stationary source or major modification for such purposes and by such means as the Health Officer deems necessary and appropriate.
- 2.5.13** Source Information. The owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or to make any determination required under Part 2.5.
- 2.5.13(a)** Such information shall include:
- 2.5.13(a)(1)** A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;
- 2.5.13(a)(2)** A detailed schedule for construction of the source or modification;
- 2.5.13(a)(3)** A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine that LAER would be applied.
- 2.5.13(b)** Upon request of the Health Officer, the owner or operator shall also provide information on:
- 2.5.13(b)(1)** The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and
- 2.5.13(b)(2)** The air quality impacts and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.
- 2.5.14** Reserved.
- 2.5.15** Reserved.
- 2.5.16** Public Participation.
- 2.5.16(a)** After receipt of an application for an Air Permit or any addition to such application, the Health Officer shall advise the applicant of any deficiency in the application or in the information submitted. In the event of such a deficiency,

the date of receipt of the application shall be, for the purpose of Part 2.5, the date on which the Health Officer received all required information.

2.5.16(b) Within one (1) year after receipt of a complete application, the Health Officer shall make a final determination of the application. This involves performing the following actions in a timely manner:

2.5.16(b)(1) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.

2.5.16(b)(2) Make available in at least one location in each region in which the proposed source or modification would be constructed a copy of all materials the applicant submitted, a copy of the preliminary determination and a copy or summary of other materials, if any, considered in making the preliminary determination.

2.5.16(b)(3) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source or modification would be constructed, of the application, the preliminary determination, and the opportunity for written public comment, as well as comment at a public hearing. Public comments will be accepted for at least 30 days from the date of initial publication.

2.5.16(b)(4) Send a copy of the notice of public comment to the applicant, to EPA, and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: any other State or local air pollution control agencies, the chief executives of the city and county where the source or modification would be located, any comprehensive regional land use planning agency, and any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the source or modification.

2.5.16(b)(5) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source or modification, alternatives to the source or modification, the control technology required, and other appropriate considerations.

2.5.16(b)(6) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. No later than ten (10) days after the close of the public comment period, the applicant may, as part of the public record, submit a written response to any comments submitted by the public. The Health Officer shall consider the applicant's response in making a final decision. The Health Officer shall make all comments available for public inspection in the same locations where the Health Officer made available preconstruction information relating to the proposed source or modification.

2.5.16(b)(7) Make a final determination whether construction should be approved, approved with conditions, or disapproved pursuant to Part 2.5.

2.5.16(b)(8) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the Health Officer made available preconstruction information and public comments relating to the source or modification.

2.5.17 Source Obligation.

2.5.17(a) An Air Permit authorizing construction shall become invalid if construction is not commenced within twenty-four (24) months after receipt of such approval, if construction is discontinued for a period of twenty-four (24) months or more, or if construction is not completed within a reasonable time. The Health Officer may extend the twenty-four (24) month period upon satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within twenty-four (24) months of the projected and approved commencement date.

2.5.17(b) An Air Permit authorizing construction shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, State or Federal law.

2.5.17(c) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of Part 2.5 shall apply to the source or modification as though construction had not yet commenced on the source or modification.

2.5.17(d) The provisions of this Paragraph 2.5.17(d) apply to projects at an existing emissions unit at a major stationary source (other than projects at a source with a PAL), that are not excluded from the definition of physical change or change

in the method of operation, in circumstances where the owner or operator elects to use the method specified in Subdivisions 2.5.2(nn)(2)(i) through (iii) for calculating projected actual emissions and the owner calculates that the project will result in a projected actual emissions increase that, added to the amount of emissions excluded under 2.5.2(nn)(2)(iii), sums to less than 50% of the amount that is a significant emissions increase as defined under 2.5.2(mm) (without reference to the amount that is a significant net emissions increase) for the regulated NSR pollutant. (This is equivalent to stating that “there is not a reasonable possibility that the project will result in a significant emissions increase.”)

- 2.5.17(d)(1)** Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
- 2.5.17(d)(1)(i)** A description of the project;
 - 2.5.17(d)(1)(ii)** Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - 2.5.17(d)(1)(iii)** A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Subdivision 2.5.2(nn)(2)(iii) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- 2.5.17(d)(2)** The owner or operator of the source shall make the information required to be documented and maintained pursuant to Paragraph 2.5.17(d)(1) available for review upon a request for inspection by the Department or the general public.
- 2.5.17(d)(3)** Nothing in this subparagraph shall be construed to exempt the owner or operator of such a unit from obtaining any minor source Air Permit in accordance with the requirements of this Chapter.
- 2.5.17(e)** The provisions of this Paragraph 2.5.17(e) apply to projects at an existing emissions unit at a major stationary source (other than projects at a source with a PAL) in circumstances where the owner or operator elects to use the method specified in Subdivisions 2.5.2(nn)(2)(i) through (iii) for calculating projected actual emissions and the owner or operator calculates that the project will result in a projected actual emissions increase that is equal to or greater than 50 % and less than 100% of the amount that is a significant emissions increase as defined under 2.5.2(mm) (without reference to the amount that is a significant net emissions increase) for the regulated NSR pollutant and is not subject to 2.5.17(d). (This is equivalent to stating that “there is a reasonable possibility that the project will result in a significant emissions increase.”)
- 2.5.17(e)(1)** Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
- 2.5.17(e)(1)(i)** A description of the project;
 - 2.5.17(e)(1)(ii)** Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - 2.5.17(e)(1)(iii)** A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under Subdivision 2.5.2(nn)(2)(iii) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- 2.5.17(e)(2)** Before beginning actual construction, the owner or operator shall provide a copy of the information set out in Subparagraph 2.5.17(e)(1) to the Health Officer. Nothing in this subparagraph shall be construed to require the owner or operator of such a unit to obtain any determination from the Health Officer before beginning actual construction; however, nothing in this subparagraph shall be construed to exempt the owner or operator of such a unit from obtaining any minor source Air Permit in accordance with the requirements of this chapter.
- 2.5.17(e)(3)** The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in Subdivision 2.5.17(e)(1)(ii); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

- 2.5.17(e)(4)** The owner or operator shall submit a report to the Health Officer within 60 days after the end of each year during which records must be generated under Subparagraph 2.5.17(e)(3). The report shall contain the following:
- 2.5.17(e)(4)(i)** All information required by Subparagraph 2.5.17(e)(1).
 - 2.5.17(e)(4)(ii)** The name, address and telephone number of the major stationary source;
 - 2.5.17(e)(4)(iii)** The annual emissions as calculated pursuant to Subparagraph 2.5.17(e)(3); and
 - 2.5.17(e)(4)(iv)** Any other information that the owner or operator wishes to include in the report.
- 2.5.17(e)(5)** The owner or operator of the source shall make the information required to be documented and maintained pursuant to Paragraph 2.5.17(e) available for review upon a request for inspection by the Department or the general public.
- 2.5.17(e)(6)** All information submitted to the Department pursuant to the requirements of Paragraph 2.5.17(e) shall be available for review at the request of any member of the public in accordance with the Department's public records review procedures found in Part 1.6.
- 2.5.18** Innovative Control Technology.
- 2.5.18(a)** An owner or operator of a proposed major stationary source or major modification may request in writing no later than the close of the comment period under Section 2.5.16 that the Health Officer approve a system of innovative control technology.
- 2.5.18(b)** The Health Officer shall determine that the source or modification may employ a system of innovative control technology, if:
- 2.5.18(b)(1)** The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare or safety in its operation or function;
 - 2.5.18(b)(2)** The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under Paragraph 2.5.9(b) by a date specified by the Health Officer. Such date shall not be later than four (4) years from the time of startup or seven (7) years from permit issuance;
 - 2.5.18(b)(3)** The source or modification would meet the requirements of Section 2.5.9 based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the Health Officer;
 - 2.5.18(b)(4)** The source or modification has obtained all emission reductions as required in Section 2.5.4 prior to initial startup of the source or modification.
 - 2.5.18(b)(5)** The consent of the Governor of any other affected state is secured;
 - 2.5.18(b)(6)** All other applicable requirements including those for public participation have been met.
- 2.5.18(c)** The Health Officer shall withdraw any approval to employ a system of innovative control technology made under this Rule, if:
- 2.5.18(c)(1)** The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or
 - 2.5.18(c)(2)** The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare or safety; or
 - 2.5.18(c)(3)** The Health Officer decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare or safety.
- 2.5.18(d)** If a source or modification fails to meet the required level of continuous emission reduction within the specified time period or the approval is withdrawn in accordance with Paragraph 2.5.18(c), the Health Officer may allow the source or modification up to an additional three (3) years to meet the requirement for the application of LAER through use of a demonstrated system of control.
- 2.5.19** Reserved.
- 2.5.20** Reserved.
- 2.5.21** Reserved.

2.5.22 Reserved.

2.5.23 Actuals PALs. The provisions in Paragraphs 2.5.23(a) through (o) of this Rule govern actuals PALs.

2.5.23(a) Applicability.

2.5.23(a)(1) The Health Officer may approve the use of an actuals PAL for any existing major stationary source if the PAL meets the requirements in Paragraphs 2.5.23(a) through (o). The term "PAL" shall mean "actuals PAL" throughout Section 2.5.23.

2.5.23(a)(2) Any physical change in or change in the method of operation of a major stationary source that maintains its total source-wide emissions below the PAL level, meets the requirements in Paragraphs 2.5.23(a) through (o), and complies with the PAL permit:

2.5.23(a)(2)(i) Is not a major modification for the PAL pollutant;

2.5.23(a)(2)(ii) Does not have to be approved through the nonattainment major NSR program;

2.5.23(a)(3) A major stationary source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.

2.5.23(b) Definitions. For the purposes of Section 2.5.23, the definitions in Subparagraphs 2.5.23(b)(1) through (11) apply. When a term is not defined in these sections, it shall have the meaning given in Section 2.5.2 or in the Clean Air Act.

2.5.23(b)(1) Actuals PAL for a major stationary source means a PAL based on the baseline actual emissions (as defined in Paragraph 2.5.2(uu)) of all emissions units (as defined in Paragraph 2.5.2(g) at the source, that emit or have the potential to emit the PAL pollutant.

2.5.23(b)(2) Allowable emissions means "allowable emissions" as defined in Paragraph 2.5.2(p), except as this definition is modified according to Subdivisions 2.5.23(b)(2)(i) and (ii).

2.5.23(b)(2)(i) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

2.5.23(b)(2)(ii) An emissions unit's potential to emit shall be determined using the definition in Paragraph 2.5.2(d), except that the words "or enforceable as a practical matter" should be added after "enforceable."

2.5.23(b)(3) Small emissions unit means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in Paragraph 2.5.2(w) or in the Clean Air Act, whichever is lower.

2.5.23(b)(4) Major emissions unit means:

2.5.23(b)(4)(i) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area.

2.5.23(b)(5) Plantwide applicability limitation (PAL) means an emission limitation expressed in tons per year, for a pollutant at a major stationary source, that is enforceable as a practical matter and established source-wide in accordance with Paragraphs 2.5.23(a) through (o).

2.5.23(b)(6) PAL effective date generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.

2.5.23(b)(7) PAL effective period means the period beginning with the PAL effective date and ending 10 years later.

2.5.23(b)(8) PAL major modification means, notwithstanding Paragraphs 2.5.2(b) and 2.5.2(c) (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.

2.5.23(b)(9) PAL permit means the major NSR permit, the minor NSR permit, or the title V permit issued by the Health Officer that establishes a PAL for a major stationary source.

2.5.23(b)(10) PAL pollutant means the pollutant for which a PAL is established at a major stationary source.

- 2.5.23(b)(11)** Significant emissions unit means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in Paragraph 2.5.2(w) or in the Clean Air Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in Subparagraph 2.5.23(b)(4).
- 2.5.23(c)** Permit application requirements. As part of a permit application requesting a PAL, the owner or operator of a major stationary source shall submit the following information to the Health Officer for approval:
- 2.5.23(c)(1)** A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.
- 2.5.23(c)(2)** Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup and shutdown.
- 2.5.23(c)(3)** The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by Subparagraph 2.5.23(m)(1).
- 2.5.23(d)** General requirements for establishing PALs.
- 2.5.23(d)(1)** The Health Officer is allowed to establish a PAL at a major stationary source, provided that at a minimum, the requirements in Subdivisions 2.5.23(d)(1)(i) through (vii) are met.
- 2.5.23(d)(1)(i)** The PAL shall impose an annual emission limitation in tons per year, that is enforceable as a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month total, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.
- 2.5.23(d)(1)(ii)** The PAL shall be established in a PAL permit that meets the public participation requirements in Paragraph 2.5.23(e).
- 2.5.23(d)(1)(iii)** The PAL permit shall contain all the requirements of Paragraph 2.5.23(g).
- 2.5.23(d)(1)(iv)** The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source.
- 2.5.23(d)(1)(v)** Each PAL shall regulate emissions of only one pollutant.
- 2.5.23(d)(1)(vi)** Each PAL shall have a PAL effective period of 10 years.
- 2.5.23(d)(1)(vii)** The owner or operator of the major stationary source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in Paragraphs 2.5.23(l) through (n) for each emissions unit under the PAL through the PAL effective period.
- 2.5.23(d)(2)** At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under Part 2.5 unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.
- 2.5.23(e)** Public participation requirements for PALs. PALs for existing major stationary sources shall be established, renewed, or increased through a procedure that is consistent with those of this Rule and 40 CFR §§51.160 and 51.161. This includes the requirement that the Health Officer provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The Health Officer must address all material comments before taking final action on the permit.
- 2.5.23(f)** Setting the 10-year actuals PAL level. The actuals PAL level for a major stationary source shall be established as the sum of the baseline actual emissions (as defined in Paragraph 2.5.2(uu)) of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under Paragraph 2.5.2(w) or under the Clean Air Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one

consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shutdown after this 24-month period must be subtracted from the PAL level. Emissions from units on which actual construction began after the beginning of the 24-month period must be added to the PAL level in an amount equal to the potential to emit of the unit if the unit began operation less than 24 months prior to the submittal of the PAL application. Baseline actual emissions from units on which actual construction began after the beginning of the 24-month period and commenced operation 24 months or more prior to the submittal of the PAL application must be added to the PAL based upon any 24 month period since the unit commenced operation. The Health Officer shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the Health Officer is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_x to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

- 2.5.23(g)** Contents of the PAL permit. The PAL permit must contain, at a minimum, the information in Subparagraphs 2.5.23(g)(1) through (10).
- 2.5.23(g)(1)** The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- 2.5.23(g)(2)** The PAL permit effective date and the expiration date of the PAL (PAL effective period).
- 2.5.23(g)(3)** Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with Paragraph 2.5.23(j) before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the Health Officer.
- 2.5.23(g)(4)** A requirement that emission calculations for compliance purposes must include emissions from startups and shutdowns.
- 2.5.23(g)(5)** A requirement that, once the PAL expires, the major stationary source is subject to the requirements of Paragraph 2.5.23(i).
- 2.5.23(g)(6)** The calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total as required by Subparagraph 2.5.23(m)(1).
- 2.5.23(g)(7)** A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions under Paragraph 2.5.23(l).
- 2.5.23(g)(8)** A requirement to retain the records required under Paragraph 2.5.23(m) on site. Such records may be retained in an electronic format.
- 2.5.23(g)(9)** A requirement to submit the reports required under Paragraph 2.5.23(n) by the required deadlines.
- 2.5.23(g)(10)** Any other requirements that the Health Officer deems necessary to implement and enforce the PAL.
- 2.5.23(h)** PAL effective period and reopening of the PAL permit. The requirements in Subparagraphs 2.5.23(h)(1) and (2) apply to actuals PALs.
- 2.5.23(h)(1)** PAL effective period. The Health Officer shall specify a PAL effective period of 10 years.
- 2.5.23(h)(2)** Reopening of the PAL permit.
- 2.5.23(h)(2)(i)** During the PAL effective period, the Health Officer must reopen the PAL permit to:
- 2.5.23(h)(2)(i)(A)** Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;
- 2.5.23(h)(2)(i)(B)** Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under Part 2.5; and
- 2.5.23(h)(2)(i)(C)** Revise the PAL to reflect an increase in the PAL as provided under Paragraph 2.5.23(k).
- 2.5.23(h)(2)(ii)** The Health Officer shall have discretion to reopen the PAL permit for the following:

- 2.5.23(h)(2)(ii)(A)** Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;
- 2.5.23(h)(2)(ii)(B)** Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and is required by these regulations; and
- 2.5.23(h)(2)(ii)(C)** Reduce the PAL if the Health Officer determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on a published air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.
- 2.5.23(h)(2)(iii)** Except for the permit reopening in Clause 2.5.23(h)(2)(i)(A) for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of Paragraph 2.5.23(e).
- 2.5.23(i)** Expiration of a PAL. Any PAL that is not renewed in accordance with the procedures in Paragraph 2.5.23(j) shall expire at the end of the PAL effective period, and the requirements in Subparagraphs 2.5.23(i)(1) through (5) shall apply.
- 2.5.23(i)(1)** Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in Subdivisions 2.5.23(i)(1)(i) and (ii).
- 2.5.23(i)(1)(i)** Within the time frame specified for PAL renewals in Subparagraph 2.5.23(j)(2), the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the Health Officer) by distributing the PAL allowable emissions for the major stationary source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under Subparagraph 2.5.23(j)(5), such distribution shall be made as if the PAL had been adjusted.
- 2.5.23(i)(1)(ii)** The Health Officer shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the Health Officer determines is appropriate.
- 2.5.23(i)(2)** Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The Health Officer may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS, or CPMS to demonstrate compliance with the allowable emission limitation.
- 2.5.23(i)(3)** Until the Health Officer issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under Subdivision 2.5.23(i)(1)(ii), the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.
- 2.5.23(i)(4)** Any physical change or change in the method of operation at the major stationary source will be subject to major NSR requirements if such change meets the definition of major modification in Paragraph 2.5.2(b).
- 2.5.23(i)(5)** The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, synthetic minor limit, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period.
- 2.5.23(j)** Renewal of a PAL.
- 2.5.23(j)(1)** The Health Officer shall follow the procedures specified in Paragraph 2.5.23(e) in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the Health Officer.
- 2.5.23(j)(2)** Application deadline. A major stationary source owner or operator shall submit a timely application to the Health Officer to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

- 2.5.23(j)(3)** Application requirements. The application to renew a PAL permit shall contain the information required in Subdivisions 2.5.23(j)(3)(i) through (iv).
- 2.5.23(j)(3)(i)** The information required in Subparagraphs 2.5.23(c)(1) through (3).
- 2.5.23(j)(3)(ii)** A proposed PAL level.
- 2.5.23(j)(3)(iii)** The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).
- 2.5.23(j)(3)(iv)** Any other information the owner or operator wishes the Health Officer to consider in determining the appropriate level for renewing the PAL.
- 2.5.23(j)(4)** PAL adjustment. In determining whether and how to adjust the PAL, the Health Officer shall consider the options outlined in Subdivisions 2.5.23(j)(4)(i) and (ii). However, in no case may any such adjustment fail to comply with Subdivision 2.5.23(j)(4)(iii).
- 2.5.23(j)(4)(i)** If the emissions level calculated in accordance with paragraph 2.5.23(f) is equal to or greater than 80 percent of the PAL level, the Health Officer may renew the PAL at the same level without considering the factors set forth in Subdivision 2.5.23(j)(4)(ii); or
- 2.5.23(j)(4)(ii)** The Health Officer may set the PAL at a level that he or she determines to be more representative of the source's baseline actual emissions, or that he or she determines to be more appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the Health Officer in his or her written rationale.
- 2.5.23(j)(4)(iii)** Notwithstanding Subdivisions 2.5.23(j)(4)(i) and (ii):
- 2.5.23(j)(4)(iii)(A)** If the potential to emit of the major stationary source is less than the PAL, the Health Officer shall adjust the PAL to a level no greater than the potential to emit of the source; and
- 2.5.23(j)(4)(iii)(B)** The Health Officer shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of Paragraph 2.5.23(k) (increasing a PAL).
- 2.5.23(j)(5)** If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the Health Officer has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.
- 2.5.23(k)** Increasing a PAL during the PAL effective period.
- 2.5.23(k)(1)** The Health Officer may increase a PAL emission limitation only if the major stationary source complies with the provisions in Subdivisions 2.5.23(k)(1)(i) through (iv).
- 2.5.23(k)(1)(i)** The owner or operator of the major stationary source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL.
- 2.5.23(k)(1)(ii)** As part of this application, the major stationary source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.
- 2.5.23(k)(1)(iii)** The owner or operator obtains a major NSR permit for all emissions unit(s) identified in Subdivision 2.5.23(k)(1)(i), regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT or LAER), even though they have also become subject to the PAL or continue to be subject to the PAL.

- 2.5.23(k)(1)(iv)** The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
- 2.5.23(k)(2)** The Health Officer shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with Subdivision 2.5.23(k)(1)(ii)), plus the sum of the baseline actual emissions of the small emissions units.
- 2.5.23(k)(3)** The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of Paragraph 2.5.23(e).
- 2.5.23(l)** Monitoring requirements for PALs.
- 2.5.23(l)(1)** General requirements.
- 2.5.23(l)(1)(i)** Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.
- 2.5.23(l)(1)(ii)** The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in Subdivisions 2.5.23(l)(2)(i) through (iv) and must be approved by the Health Officer.
- 2.5.23(l)(1)(iii)** Notwithstanding Subdivision 2.5.23(l)(1)(ii), an alternative monitoring approach that meets Subdivision 2.5.23(l)(1)(i) may be employed if approved by the Health Officer.
- 2.5.23(l)(1)(iv)** Failure to use a monitoring system that meets the requirements of this Rule renders the PAL invalid.
- 2.5.23(l)(2)** Minimum Performance Requirements for Approved Monitoring Approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in Subparagraphs 2.5.23(l)(3) through (9):
- 2.5.23(l)(2)(i)** Mass balance calculations for activities using coatings or solvents;
- 2.5.23(l)(2)(ii)** CEMS;
- 2.5.23(l)(2)(iii)** CPMS or PEMS; and
- 2.5.23(l)(2)(iv)** Emission factors.
- 2.5.23(l)(3)** Mass Balance Calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:
- 2.5.23(l)(3)(i)** Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;
- 2.5.23(l)(3)(ii)** Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and
- 2.5.23(l)(3)(iii)** Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the Health Officer determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- 2.5.23(l)(4)** CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:
- 2.5.23(l)(4)(i)** CEMS must comply with applicable Performance Specifications found in 40 CFR 60, appendix B; and
- 2.5.23(l)(4)(ii)** CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating.
- 2.5.23(l)(5)** CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:

- 2.5.23(l)(5)(i)** The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and
- 2.5.23(l)(5)(ii)** Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the Health Officer, while the emissions unit is operating.
- 2.5.23(l)(6)** Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
- 2.5.23(l)(6)(i)** All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
- 2.5.23(l)(6)(ii)** The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and
- 2.5.23(l)(6)(iii)** If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the Health Officer determines that testing is not required.
- 2.5.23(l)(7)** A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.
- 2.5.23(l)(8)** Notwithstanding the requirements in Subparagraphs 2.5.23(l)(3) through (7), where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the Health Officer shall, at the time of permit issuance:
- 2.5.23(l)(8)(i)** Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or
- 2.5.23(l)(8)(ii)** Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.
- 2.5.23(l)(9)** Re-validation. All data used to establish the PAL pollutant must be revalidated through performance testing or other scientifically valid means approved by the Health Officer. Such testing must occur at least once every 5 years after issuance of the PAL.
- 2.5.23(m)** Recordkeeping requirements.
- 2.5.23(m)(1)** The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of Section 2.5.23 and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.
- 2.5.23(m)(2)** The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus 5 years:
- 2.5.23(m)(2)(i)** A copy of the PAL permit application and any applications for revisions to the PAL; and
- 2.5.23(m)(2)(ii)** Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.
- 2.5.23(n)** Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Health Officer in accordance with the applicable title V operating permit. The reports shall meet the requirements in Subparagraphs 2.5.23(n)(1) through (3).
- 2.5.23(n)(1)** Semi-annual report. This report shall contain the information required in Subdivisions 2.5.23(n)(1)(i) through (vii).
- 2.5.23(n)(1)(i)** The identification of owner and operator and the permit number.
- 2.5.23(n)(1)(ii)** Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to Subparagraph 2.5.23(m)(1).
- 2.5.23(n)(1)(iii)** All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.

- 2.5.23(n)(1)(iv)** A list of any emissions units modified or added to the major stationary source during the preceding 6-month period.
- 2.5.23(n)(1)(v)** The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
- 2.5.23(n)(1)(vi)** A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by Subparagraph 2.5.23(l)(7).
- 2.5.23(n)(1)(vii)** A signed statement by a responsible official (as defined in Chapter 18) certifying the truth, accuracy, and completeness of the information provided in the report.
- 2.5.23(n)(2)** Deviation report. The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to Subparagraph 18.5.3(c)(2) shall satisfy this reporting requirement. The reports shall contain the following information:
- 2.5.23(n)(2)(i)** Identification of owner and operator and the permit number;
- 2.5.23(n)(2)(ii)** The PAL requirement that experienced the deviation or that was exceeded;
- 2.5.23(n)(2)(iii)** Emissions resulting from the deviation or the exceedance; and
- 2.5.23(n)(2)(iv)** A signed statement by a responsible official (as defined in Chapter 18) certifying the truth, accuracy, and completeness of the information provided in the report.
- 2.5.23(n)(3)** Re-validation results. The owner or operator shall submit to the Health Officer the results of any re-validation test or method within 3 months after completion of such test or method.
- 2.5.23(o)** Transition requirements.
- 2.5.23(o)(1)** The Health Officer may not issue a PAL that does not comply with the requirements in Paragraphs 2.5.23(a) through (o) after the effective date.
- 2.5.23(o)(2)** The Health Officer may supersede any PAL that was established prior to the effective date of this Rule with a PAL that complies with the requirements of Paragraphs 2.5.23(a) through (o).
- 2.5.24** If any provision of Part 2.5, or the application of such provision to any person or circumstance, is held invalid, the remainder of this Rule, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.
- 2.6 Requirements for Control Technology [Determinations for Major Sources in Accordance with Clean Air Act §112(g)].**
- 2.6.1** Applicability.
- 2.6.1(a)** The requirements of Sections 2.6.1 through 2.6.4 of this Regulation carry out §112(g)(2)(B) of the 1990 Clean Air Act Amendments (hereinafter, referred to as ‘the Act’ in Part 2.6).
- 2.6.1(b)** Overall requirements. The requirements of Sections 2.6.1 through 2.6.4 of this Regulation apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants after the effective date of this Part unless the major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to §§112(d), 112(h), or 112(j) and incorporated in another Subpart of 40 CFR 63 or Chapter 14 of these Rules and Regulations, or the owner or operator of such major source has received all necessary air quality permits for such construction or reconstruction project before the effective date of Part 2.6.
- 2.6.1(c)** Exclusion for electric utility steam generating units. The requirements of Part 2.6 do not apply to electric utility steam generating units unless and until such time as these units are added to the source category list pursuant to §112(c)(5) of the Act.
- 2.6.1(d)** Exclusion for stationary sources in deleted source categories. The requirements of this Part do not apply to stationary sources that are within a source category that has been deleted from the source category list pursuant to §112(c)(9) of the Act.

- 2.6.1(e)** Exclusion for research and development activities. The requirements of this Part do not apply to research and development activities, as defined in Section 2.6.2.
- 2.6.1(f)** Prohibition. After the effective date of this Regulation, no person may begin actual construction or reconstruction of a major source of HAP unless:
- 2.6.1(f)(1)** The major source in question has been specifically regulated or exempted from regulation under a standard issued pursuant to §§112(d), 112(h) or 112(j) in 40 CFR 63, Subpart B, as incorporated by reference in Chapter 14, and the owner and operator has fully complied with all procedures and requirements for preconstruction review established by that standard, including any applicable requirements set forth in Subpart A of 40 CFR 63; or
- 2.6.1(f)(2)** The Department has made a final and effective case-by-case determination pursuant to the provisions of this Part such that emissions from the constructed or reconstructed major source will be controlled to a level no less stringent than the maximum achievable control technology emission limitation for new sources.
- 2.6.2** Definitions. Terms used in this Regulation that are not defined below have the meaning given to them in the Act and in 40 CFR 63, Subpart A.
- 2.6.2(a)** "Affected Source" means the stationary source or group of stationary sources which, when fabricated (on site), erected, or installed meets the definition of "construct a major source" or the definition of "reconstruct a major source" contained in this section.
- 2.6.2(b)** "Affected States" are all States:
- 2.6.2(b)(1)** Whose air quality may be affected and that are contiguous to the State in which a MACT determination is made in accordance with this Part; or
- 2.6.2(b)(2)** Whose air quality may be affected and that are within 50 miles of the major source for which a MACT determination is made in accordance with this Part.
- 2.6.2(c)** "Available Information" means, for purposes of identifying control technology options for the affected source, information contained in the following information sources as of the date of approval of the MACT determination by the Department:
- 2.6.2(c)(1)** A relevant proposed regulation, including all supporting information;
- 2.6.2(c)(2)** Background information documents for a draft or proposed regulation;
- 2.6.2(c)(3)** Data and information available from the Control Technology Center developed pursuant to §113 of the Act;
- 2.6.2(c)(4)** Data and information contained in the Aerometric Informational Retrieval System including information in the MACT data base;
- 2.6.2(c)(5)** Any additional information that can be expeditiously provided by the Health Officer; and
- 2.6.2(c)(6)** For the purpose of determinations by the Department, any additional information provided by the applicant or others, and any additional information considered available by the Department.
- 2.6.2(d)** "Construct a Major Source" means:
- 2.6.2(d)(1)** To fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, or
- 2.6.2(d)(2)** To fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, unless the process or production unit satisfies criteria (i) through (vi) below:
- 2.6.2(d)(2)(i)** All HAP emitted by the process or production unit that would otherwise be controlled under the requirements of this Part will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;
- 2.6.2(d)(2)(ii)**

- 2.6.2(d)(2)(ii)(A)** The Department has determined within a period of 5 years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT), or lowest achievable emission rate (LAER) under Chapter 2, or
- 2.6.2(d)(2)(ii)(B)** The Department determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT or LAER determination);
- 2.6.2(d)(2)(iii)** The Department determines that the percent control efficiency for emissions of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;
- 2.6.2(d)(2)(iv)** The Department has provided notice and an opportunity for public comment concerning its determination that criteria in Subdivisions 2(i), 2(ii), and 2(iii) of this definition apply and concerning the continued adequacy of any prior LAER or BACT determination;
- 2.6.2(d)(2)(v)** If any commenter has asserted that a prior LAER or BACT determination is no longer adequate, the Department has determined that the level of control required by that prior determination remains adequate; and
- 2.6.2(d)(2)(vi)** Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the Department are predicated will be construed by the Department as applicable requirements under §504(a) and either have been incorporated into any existing Major Source Operating Permit for the affected facility or will be incorporated into such permit upon issuance.
- 2.6.2(e)** "Control Technology" means measures, processes, methods, systems, or techniques to limit the emission of hazardous air pollutants through process changes, substitution of materials or other modifications including, but not limited to, measures that:
- 2.6.2(e)(1)** Reduce the quantity of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications;
- 2.6.2(e)(2)** Enclose systems or processes to eliminate emissions;
- 2.6.2(e)(3)** Collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point;
- 2.6.2(e)(4)** Are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in 42 U.S.C. 7412(h); or
- 2.6.2(e)(5)** Are a combination of Subparagraphs 2.6.2(e)(1) through (4).
- 2.6.2(f)** "Department" means the Department as defined in these Regulations.
- 2.6.2(g)** "Effective Date of §112(g)(2)(B)" means the effective date of this Regulation adopted by the Department.
- 2.6.2(h)** "Electric Utility Steam Generating Unit" means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that co-generates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electric output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.
- 2.6.2(i)** "Greenfield Site" means a contiguous area under common control that is an undeveloped site.
- 2.6.2(j)** "Hazardous Air Pollutant or HAP" means any of the substances listed in Appendix D of these Regulations.
- 2.6.2(k)** "List of Source Categories" means the Source Category List required by §112(c) of the Act.
- 2.6.2(l)** "Maximum Achievable Control Technology (MACT) Emission Limitation for New Sources" means the emission limitation which is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and which reflects the maximum degree of reduction in emissions that the Department, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable by the constructed or reconstructed major source.
- 2.6.2(m)** "Process or Production Unit" means any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one process or production unit.

- 2.6.2(n)** "Reconstruct a Major Source" means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, whenever:
- 2.6.2(n)(1)** The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and
 - 2.6.2(n)(2)** It is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under this Regulation.
- 2.6.2(o)** "Research and Development Activities" means activities conducted at a research or laboratory facility whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.
- 2.6.2(p)** "Similar Source" means a stationary source or process that has comparable emissions and is structurally similar in design and capacity to a constructed or reconstructed major source such that the source could be controlled using the same control technology.
- 2.6.3** Maximum Achievable Control Technology (MACT) Determinations for Constructed and Reconstructed Major Sources.
- 2.6.3(a)** Applicability. The requirements of this section apply to an owner or operator who constructs or reconstructs a major source of HAP subject to a case-by-case determination of maximum achievable control technology pursuant to this Regulation.
 - 2.6.3(b)** Principles of MACT determinations. The following general principles shall govern preparation by the owner or operator of each permit application or other application requiring a case-by-case MACT determination concerning construction or reconstruction of a major source, and all subsequent review of and actions taken concerning such an application by the Department:
 - 2.6.3(b)(1)** The MACT emission limitation or MACT requirements recommended by the applicant and approved by the Department shall not be less stringent than the emission control which is achieved in practice by the best controlled similar source, as determined by the Department.
 - 2.6.3(b)(2)** Based upon available information, as defined in this Regulation, the MACT emission limitation and control technology (including any requirements under Subparagraph 2.6.3(b)(3) below) recommended by the applicant and approved by the Department shall achieve the maximum degree of reduction in emissions of HAP which can be achieved by utilizing those control technologies that can be identified from the available information, taking into consideration the costs of achieving such emission reduction and any non-air quality health and environmental impacts and energy requirements associated with the emission reduction.
 - 2.6.3(b)(3)** The applicant may recommend a specific design, equipment, work practice, or operational standard, or a combination thereof, and the Department may approve such a standard if the Department specifically determines that it is not feasible to prescribe or enforce an emission limitation under the criteria set forth in §112(h)(2) of the Act.
 - 2.6.3(b)(4)** If the Administrator has either proposed a relevant emission standard pursuant to §§112(d) or 112(h) of the Act or adopted a presumptive MACT determination for the source category which includes the constructed or reconstructed major source, then the MACT requirements applied to the constructed or reconstructed major source shall have considered those MACT emission limitations and requirements of the proposed standard or presumptive MACT determination.
 - 2.6.3(c)** Application requirements for a case-by-case MACT determination.
 - 2.6.3(c)(1)** An application for a MACT determination (whether a permit application under Chapter 18, or other permit specified by the Department under Paragraph 2.6.3(d)) shall specify a control technology selected by the owner or operator that, if properly operated and maintained, will meet the MACT emission limitation or standard as determined according to the principles set forth in Paragraph 2.6.3(b).
 - 2.6.3(c)(2)** In each instance where a constructed or reconstructed major source would require additional control technology or a change in control technology, the application for a MACT determination shall contain the following information:
 - 2.6.3(c)(2)(i)** The name and address (physical location) of the major source to be constructed or reconstructed;

- 2.6.3(c)(2)(ii)** A brief description of the major source to be constructed or reconstructed and identification of any listed source category or categories in which it is included;
- 2.6.3(c)(2)(iii)** The expected commencement date for the construction or reconstruction of the major source;
- 2.6.3(c)(2)(iv)** The expected completion date for construction or reconstruction of the major source;
- 2.6.3(c)(2)(v)** The anticipated date of start-up for the constructed or reconstructed major source;
- 2.6.3(c)(2)(vi)** The HAP emitted by the constructed or reconstructed major source, and the estimated emission rate for each such HAP, to the extent this information is needed by the Department to determine MACT;
- 2.6.3(c)(2)(vii)** Any enforceable emission limitations applicable to the constructed or reconstructed major source;
- 2.6.3(c)(2)(viii)** The maximum and expected utilization of capacity of the constructed or reconstructed major source, and the associated uncontrolled emission rates for that source, to the extent this information is needed by the Department to determine MACT;
- 2.6.3(c)(2)(ix)** The controlled emissions for the constructed or reconstructed major source in tons/year at expected and maximum utilization of capacity, to the extent this information is needed by the Department to determine MACT;
- 2.6.3(c)(2)(x)** A recommended emission limitation for the constructed or reconstructed major source consistent with the principles set forth in Paragraph 2.6.3(d);
- 2.6.3(c)(2)(xi)** The selected control technology to meet the recommended MACT emission limitation, including technical information on the design, operation, size, estimated control efficiency of the control technology (and the manufacturer's name, address, telephone number, and relevant specifications and drawings, if requested by the Department);
- 2.6.3(c)(2)(xii)** Supporting documentation including identification of alternative control technologies considered by the applicant to meet the emission limitation, and analysis of cost and non-air quality health environmental impacts or energy requirements for the selected control technology; and
- 2.6.3(c)(2)(xiii)** Any other relevant information required pursuant to Subpart A, 40 CFR 63.
- 2.6.3(c)(3)** In each instance where the owner or operator contends that a constructed or reconstructed major source will be in compliance, upon startup, with case-by-case MACT under this Regulation without a change in control technology, the application for a MACT determination shall contain the following information:
 - 2.6.3(c)(3)(i)** The information described in Subdivisions 2.6.3(c)(2)(i) through (x); and
 - 2.6.3(c)(3)(ii)** Documentation of the control technology in place.
- 2.6.3(d)** Permit Content.
 - 2.6.3(d)(1)** The Air Permit will contain a MACT emission limitation (or a MACT work practice standard if the Department determines it is not feasible to prescribe or enforce an emission standard) to control the emissions of HAP. The MACT emission limitation or standard will be determined by the Department and will conform to the principles set forth in Paragraph 2.6.3(b) of this Regulation.
 - 2.6.3(d)(2)** The Air Permit will specify any notification, operation and maintenance, performance testing, monitoring, reporting and record keeping requirements, including:
 - 2.6.3(d)(2)(i)** Additional emission limits, production limits, operational limits or other terms and conditions necessary to ensure enforceability of the MACT emission limitation;
 - 2.6.3(d)(2)(ii)** Compliance certifications, testing, monitoring, reporting and record keeping requirements that are consistent with the requirements of Part 18.7;
 - 2.6.3(d)(2)(iii)** In accordance with §114(a)(3) of the Act, monitoring shall be capable of demonstrating continuous compliance during the applicable reporting period. Such monitoring data shall be of sufficient quality to be used as a basis for enforcing all applicable requirements established under this Part, including emission limitations;

- 2.6.3(d)(2)(iv)** A statement requiring the owner or operator to comply with all applicable requirements contained in Subpart A of 40 CFR 63;
- 2.6.3(d)(3)** All provisions contained in the Air Permit shall be enforceable upon the effective date of issuance of said permit, as provided by Paragraph 2.6.3(g).
- 2.6.3(d)(4)** The Air Permit shall expire if construction or reconstruction has not commenced within 18 months of issuance, unless the Department has granted an extension which shall not exceed an additional 12 months.
- 2.6.3(e)** Public participation.
- 2.6.3(e)(1)** Notice shall be given by publication in a newspaper of general circulation in the area where the source is located to give general public notice and also to persons on a mailing list developed by the Department for persons desiring notice of permit action, including persons who have requested in writing to be on such a list;
- 2.6.3(e)(2)** The notice shall identify the affected facility; the name and address of the permittee; the address of the Department; the activity or activities involved in the permit action; the emissions change involved in any permit modification; the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, including any compliance plan, monitoring and compliance certification report, except for information entitled to be kept confidential, and all other materials available to the Department that are relevant to the permit decision; a brief description of the comment procedures required by this Chapter; and the time and place of any hearing that may be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled);
- 2.6.3(e)(3)** The Department shall provide at least 30 days for public comment and shall give notice of any public hearing at least 30 days in advance of the hearing; and
- 2.6.3(e)(4)** The Department shall keep a record of the comments made during the public participation process.
- 2.6.3(e)(5)** Exceptions.
- 2.6.3(e)(5)(i)** If the owner or operator obtains a Major Source Operating Permit prior to construction or reconstruction of a source subject to this Regulation, then the requirements of Subparagraphs 2.6.3(e)(1) through (4) do not apply.
- 2.6.3(e)(5)(ii)** If the owner or operator is concurrently applying for an Air Permit under Parts 2.4 or 2.5 of this Chapter, the public participation requirements of those Parts shall substitute for the requirements of Paragraph 2.6.3(e).
- 2.6.3(f)** Prohibition of construction. An owner or operator applying for a MACT emission limitation for new sources under this Regulation shall not begin construction until a permit has been issued pursuant to this Regulation.
- 2.6.3(g)** Effective date. The effective date of a MACT determination shall be the date of issuance of a final Major Source Operating Permit incorporating a MACT determination (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or a permit issued pursuant to Part 2.6.
- 2.6.3(h)** Compliance date. On and after the date of start-up, a constructed or reconstructed major source which is subject to the requirements of Part 2.6 shall be in compliance with all applicable requirements specified in the MACT determination.
- 2.6.3(i)** Compliance with MACT determinations.
- 2.6.3(i)(1)** An owner or operator of a constructed or reconstructed major source that is subject to a MACT determination shall comply with all requirements in the final Major Source Operating Permit (in those instances where the owner or operator either is required or elects to obtain such a permit before construction or reconstruction), or other permit issued pursuant to Part 2.6, including but not limited to any MACT emission limitation or MACT work practice standard, and any notification, operation and maintenance, performance testing, monitoring, reporting, and recordkeeping requirements.
- 2.6.3(i)(2)** An owner or operator of a constructed or reconstructed major source which has obtained a MACT determination shall be deemed to be in compliance with §112(g)(2)(B) of the Act and this Regulation only to the extent that the constructed or reconstructed major source is in compliance with all requirements set forth in the final Major Source Operating Permit (in those instances where the owner or operator either is required or elects to obtain

such a permit before construction or reconstruction), or other permit issued pursuant to this Chapter. Any violation of such requirements by the owner or operator shall be deemed by the Department and by EPA to be a violation of the prohibition on construction or reconstruction in §112(g)(2)(B) and this Regulation for whatever period the owner or operator is determined to be in violation of such requirements, and shall subject the owner or operator to appropriate enforcement action under the Act.

- 2.6.4** Requirements for Constructed or Reconstructed Major Sources Subject to a Subsequently Promulgated MACT Standard or MACT Requirement.
- 2.6.4(a)** If the Administrator promulgates an emission standard under §§112(d) or 112(h) of the Act or the Department issues a determination under §112(j) of the Act [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14] that is applicable to a stationary source or group of sources which would be deemed to be a constructed or reconstructed major source under this Regulation before the date that the owner or operator has obtained a final and legally effective MACT determination pursuant to this Regulation, the owner or operator of the source(s) shall comply with the promulgated standard or determination rather than any MACT determination under this Regulation, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.
- 2.6.4(b)** If the Administrator promulgates an emission standard under §§112(d) or 112(h) of the Act or the Department makes a determination under §112(j) of the Act [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14] that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this Regulation and has been subject to a prior case-by-case MACT determination pursuant to this Regulation, and the owner and operator obtained a final and legally effective case-by-case MACT determination prior to the promulgation date of such emission standard, then the Department shall (if the initial Major Source Operating Permit has not yet been issued) issue an initial operating permit which incorporates the emission standard or determination, or shall (if the initial Major Source Operating Permit has been issued) revise the operating permit according to the reopening procedures in Chapter 18 to incorporate the emission standard or determination.
- 2.6.4(b)(1)** The EPA may include in the emission standard established under §§112(d) or 112(h) of the Act a specific compliance date for those sources which have obtained a final and legally effective MACT determination under this Regulation and which have submitted the information required by Section 2.6.3 of this Regulation to the EPA before the close of the public comment period for the standard established under §112(d) of the Act. Such date shall assure that the owner or operator shall comply with the promulgated standard as expeditiously as practicable, but not longer than 8 years after such standard is promulgated. In that event, the Department shall incorporate the applicable compliance date in the Major Source Operating Permit.
- 2.6.4(b)(2)** If no compliance date has been established in the promulgated §§112(d) or 112(h) standard or §112(j) determination [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14], for those sources which have obtained a final and legally effective MACT determination under this Regulation, then the Department shall establish a compliance date in the permit that assures that the owner or operator shall comply with the promulgated standard or determination as expeditiously as practicable, but not longer than 8 years after such standard is promulgated or a §112(j) determination [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14] is made.
- 2.6.4(b)(3)** Notwithstanding the requirements of Paragraphs 2.6.4(a) and (b), if the Administrator promulgates an emission standard under §§112(d) or 112(h) of the Act or the Department issues a determination under §112(j) of the Act [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14] that is applicable to a stationary source or group of sources which was deemed to be a constructed or reconstructed major source under this Regulation and which is the subject of a prior case-by-case MACT determination pursuant to Section 2.6.3, and the level of control required by the emission standard issued under §§112(d) or 112(h) or the determination issued under §112(j) [40 CFR 63, Subpart B, as incorporated by reference in Chapter 14] is less stringent than the level of control required by any emission limitation or standard in the prior MACT determination, the Department is not required to incorporate any less stringent terms of the promulgated standard in the Major Source Operating Permit applicable to such source(s) and may in its discretion consider any more stringent provisions of the prior MACT determination to be applicable legal requirements when issuing or revising such an operating permit.

CHAPTER 3 - VARIANCES

(Adopted January 28, 1972. Revised October 10, 1990; and August 14, 2024.)

3.1 Granting of Variances

- 3.1.1** The Board may grant individual variances beyond the limitations prescribed in the Act or these regulations, whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation, requirement or order of the Board of Health Officer would impose serious hardship without equal or greater benefits to the public, and the emissions occurring or proposed to occur do not endanger human health or safety, human comfort, and aesthetic values. In granting or denying a variance the Board shall file and publish a written opinion stating the facts and reasons leading to its decision.
- 3.1.2** (Added October 10, 1990:) A variance will not be considered for approval under any circumstances if emissions from the source for which the variance is petitioned can be shown by computer modeling or ambient monitoring to cause outside the facility property line any of the following:
- 3.1.2(a)** An exceedance of any National Ambient Air Quality Standard (NAAQS) for any pollutant; or
- 3.1.2(b)** An amount equal to or greater than one-fortieth of the threshold limit value (TLV) for any compound considered as air toxic by the United States Environmental Protection Agency; or
- 3.1.2(c)** If the toxic emission is a carcinogen, an amount equal to or greater than that which would result in an individual having more than one (1) in one hundred thousand (100,000) chance of developing cancer over a lifetime (70 years) of exposure to that amount.
- 3.1.3** In granting a variance, the Board may impose such conditions as the policies of the Act and these rules and regulations may require. If the hardship complained of consists solely of the need for a reasonable delay in which to correct a violation of these rules and regulations, the Board shall condition the granting of such variance upon the posting of sufficient performance bond (a minimum of ten percent of the anticipated capital cost of the project) or other security to assure the correction of such violation within the time prescribed.
- 3.1.4** Any variance granted pursuant to the provisions of this section shall be granted for such period of time, not exceeding one year, as shall be specified by the Board at the time of the grant of such variance, and upon the condition that the person who receives such variance shall make such periodic progress reports as the Board shall specify. Such variance may be extended from year to year by affirmative action of the Board, but only if satisfactory progress has been shown.
- 3.1.5** Any person seeking a variance shall do so by filing a petition for variance with the Board, which shall promptly give notice of such petition in a newspaper of general circulation in the county in which the installation or property for which variance sought is located. The Health Officer shall promptly investigate such petition, consider the views of persons who might be adversely affected by the granting of a variance and make a recommendation to the Board as to the disposition of the petition. (Revised October 10, 1990.)
- 3.1.6** A variance or renewal shall not be a right of the petitioner or holder thereof but shall be in the discretion of the Board. The rules of administrative procedure contained in Chapter 12 of these regulations shall not apply to this variance procedure. However, any person adversely affected by a variance or renewal granted by the Board may obtain judicial review by filing notice of appeal with the Register in Chancery of the Circuit Court in Equity within twenty days from the action of the Board thereon. The case shall be heard by the Court under the same rules and with the same requirements as a petition for injunction would be heard. (Revised October 10, 1990.)

3.2 Petition Procedures.

- 3.2.1** Any person subject to any rule or regulation, requirement or order, may petition the Board for a variance from the application thereof, as prescribed by the Act or these regulations. A petition for a variance must state the following:
- 3.2.1(a)** The name, address and telephone number of the petitioner, or other person authorized to receive service of notices.
- 3.2.1(b)** Whether the petitioner is an individual, partnership, corporation or other entity, and names and addresses of the partners, if a partnership, and names and addresses of the officers, if a corporation, and names and address of the persons in control, if other entity. (Proposed for revision 2024.)
- 3.2.1(c)** The type of business of activity involved in the application and the street address at which it is conducted.
- 3.2.1(d)** A brief description of the article, machine, equipment or other contrivance, if any involved in the petition.

- 3.2.1(e)** The signature of the petitioner, or that of some person on his behalf, and, where the person signing is not the petitioner, the authority to sign.
- 3.2.1(f)** The rule or regulation, requirement or order complained from which a variance is requested.
- 3.2.1(g)** The facts showing why compliance with such rule or regulation, requirement or order would impose serious hardship on the petitioner or any other person or persons without equal or greater benefits to the public. (Added October 10, 1990:) Hardship which consists of economic infeasibility or technical impossibility shall be stated in a format consistent with guidance available for the same from the United States Environmental Protection Agency.
- 3.2.1(h)** The facts showing why the emissions occurring or proposed to occur do not endanger or tend to endanger human health or safety, human comfort, and aesthetic values.
- 3.2.1(i)** For what period of time the variance is sought and why.
- 3.2.1(j)** Provisions of the rule or regulation, requirement or order which the petitioner can meet and the date when petitioner can comply with such provisions.
- 3.2.1(k)** Whether or not any case involving the same identical equipment or process identified in Paragraph 3.2.1(d) is pending in any court, civil or criminal.
- 3.2.2** All petitions shall be typewritten, double spaced, on legal or letter size paper, on one side of the paper only.
- 3.2.3** (Added October 10, 1990:) The Health Officer shall not accept for filing, any petition which does not comply with these rules and regulations relating to the form, filing and service of petitions unless the Chairman or any two members of the Board direct otherwise and confirm such direction in writing. Such direction need not be made at a meeting of the Board.
- 3.2.4** (Added October 10, 1990:) The burden of proof of the petitioner's claims per paragraphs 3.2.1 (g) and (h) shall rest with the petitioner. The Health Officer may request additional information in support of such claims either in writing or by means of an informal meeting. The Health Officer shall provide guidance to the petitioner if requested prior to petition submittal of the information required and method of submittal for claims of economic infeasibility or technical impossibility under Paragraph 3.2.1 (g).
- 3.2.5** (Added October 10, 1990:) The Board shall take action on the petition within 90 days of the date of the notice of petition. The action of the Board shall be final except as noted in Section 3.1.6.
- 3.3** **Reserved.** (Removed and Reserved October 10, 1990.)
- 3.4** **Objection Procedures.**
- 3.4.1** A person may file a written objection to the grant of a variance within 21 days from initial advertised notice. (Revised October 10, 1990.) An objection to the granting of a variance must state:
- 3.4.1(a)** The objector's name, address, and telephone number.
- 3.4.1(b)** Whether the objector is an individual, partnership, corporation or other entity, and names and address of the partners if a partnership, names and address of the officers if a corporation, and the names and address of the persons in control if other entity.
- 3.4.1(c)** A specification of which petition for a variance is being objected to.
- 3.4.1(d)** A statement indicating why the objector believes that the variance should not be granted.
- 3.4.2** All objections should be typewritten or carefully printed in ink on legal or letter size paper.
- 3.5** **Reserved.** (Removed and Reserved October 10, 1990.)

CHAPTER 4 - AIR POLLUTION EMERGENCY

(Adopted January 28, 1972. Revised February 8, 1989; and August 14, 2024.)

4.1 Air Pollution Emergency.

The Health Officer is authorized and empowered to enforce or require enforcement of any provisions of this Chapter throughout the territorial limits of Jefferson County, Alabama.

4.2 Powers and Duties of the Health Officer.

4.2.1 Any other provisions of law to the contrary notwithstanding, if the Health Officer finds that a generalized condition of air pollution exists and that it creates an emergency requiring immediate action to protect human health or safety, the Health Officer shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air contaminants, and such order shall fix a place and time, not later than twenty-four hours thereafter, for a hearing to be held before the Board. Not more than twenty-four hours after the commencement of such hearing, and without adjournment thereof, the Board shall affirm, modify or set aside the order of the Health Officer.

4.2.2 In the absence of a generalized condition of air pollution of the type referred to in Section 4.2.1 of this part, but if the Health Officer finds that emissions from the operation of one or more air contaminant sources are causing imminent danger to human health or safety, he may order the person or persons responsible for the operation or operations in question to reduce or discontinue emissions immediately. In such event, the requirements for hearing and affirmance, modification or setting aside of order set forth in Section 4.2.1 of this part shall apply.

4.2.3 Nothing in this section shall be construed to limit any power which the Health Officer, the Alabama Air Pollution Control Commission, the Governor and any other person may have to declare an emergency and act on the basis of such declaration, if such power is conferred by statute or constitutional provision, or inheres in the office.

4.2.4 In addition to, and without in any way limiting the foregoing, if the Health Officer determines at any time that air pollution in Jefferson County or in any portion of the County constitutes an emergency risk to the health of those present in the County or said area of the County, and that the resources of the Jefferson County Board of Health are not sufficient to abate said air pollution, such determination shall be communicated by telephone and in writing, with the factual findings on which such determination is based to the Director of the Alabama Department of Environmental Management or to the Environmental Protection Agency of the Federal Government. Such communication shall request assistance in the abatement of said air pollution emergency consistent with the provisions of Act 769, Alabama Legislature, Regular Session 1969, and the Federal Clean Air Act as amended. The Health Officer may delegate to the Deputy Health Officer or to the Director the power to make said determinations and deliver the same to the Director of the Alabama Department of Environmental Management or the Environmental Protection Agency in the name of the Health Officer. (Revised February 8, 1989.)

4.3 Episode Criteria.

When the Health Officer determines that conditions justify the proclamation of an air pollution episode stage, due to the accumulation of air contaminants in any place within the County, attaining levels which could, if sustained or exceeded, lead to a substantial threat to the health of persons, he shall be guided by the following criteria:

4.3.1 Episode stages shall be determined and declared upon the basis of average concentration recorded at any monitoring station in the County.

4.3.2 If contamination and meteorology warrant, any advanced episode stage may be declared by the Health Officer without first declaring a lesser degree of Alert or Watch. The Health Officer shall, at his discretion, declare a lesser stage, the termination or the continuance of the advanced episode stage during such times when contamination and meteorological conditions moderate significantly after an advanced episode stage has been declared.

4.3.3 Episode Watch. The Health Officer shall declare an Episode Watch when one or more of the following events take place:

4.3.3(a) An Atmospheric Stagnation Advisory is issued by the National Weather Service, stating that atmospheric conditions marked by a slow moving high pressure system, light winds, and temperature inversions are expected to affect Jefferson County or portions thereof for the next thirty-six (36) hours. (Revised February 9, 1989.)

4.3.3(b) A forecast by local meteorologists that stagnant atmospheric conditions as described above could result in high air pollution levels in Jefferson County or portions thereof.

- 4.3.3(c)** Validated reports of abnormally high air pollution measurements, specifically, reaching or exceeding fifty percent (50%) of the Alert level of Section 4.3.4 for at least three (3) consecutive hours at a given locality in the County.
- 4.3.4** Alert. The Health Officer shall declare an Alert when any one of the following contaminant concentrations is measured at any monitoring site, and due to adverse meteorological conditions can be expected to remain at these levels or higher for the next 12 hours or more unless control measures are taken: (Reference Methods updated February 9, 1989.)
- 4.3.4(a)** Sulfur Dioxide. Measured by continuous reference method analyzer, or equivalent.
24-hour average, 0.30 ppm (800 $\mu\text{g}/\text{m}^3$)
- 4.3.4(b)** PM₁₀. Measured by a PM₁₀ sampler, 24 hour accumulation. (Revised February 9, 1989.)
24-hour average, 350 $\mu\text{g}/\text{m}^3$ (Adopted February 8, 1989.)
- 4.3.4(c)** Carbon Monoxide. Measured by continuous reference method analyzer, or equivalent.
8-hour average, 15 ppm (17 mg/m^3)
- 4.3.4(d)** Nitrogen Dioxide. Measured by continuous reference method analyzer, or equivalent.
24-hour average, 0.15 ppm (282 $\mu\text{g}/\text{m}^3$) or
1-hour average, 0.6 (1130 $\mu\text{g}/\text{m}^3$)
- 4.3.4(e)** Ozone. Measured by continuous reference method analyzer or equivalent. (Revised February 9, 1989.)
1-hour average, 0.15 ppm (295 $\mu\text{g}/\text{m}^3$)
- 4.3.5** Warning. A Warning shall be declared by the Health Officer when the concentrations of any of the following air contaminants measured at any monitoring site and due to adverse meteorological conditions can be expected to remain at these levels or higher for the next twelve (12) hours or more unless control measures are taken: (Reference Methods updated February 9, 1989.)
- 4.3.5(a)** Sulfur Dioxide. Measured by continuous reference method analyzer, or equivalent.
24-hour average, 0.6 ppm (1600 $\mu\text{g}/\text{m}^3$)
- 4.3.5(b)** PM₁₀. Measured by a PM₁₀ sampler, 24 hour accumulation. (Revised February 9, 1989.)
24-hour average, 420 $\mu\text{g}/\text{m}^3$ (Adopted February 8, 1989.)
- 4.3.5(c)** Carbon Monoxide. Measured by continuous reference method analyzer, or equivalent.
8-hour average, 30 ppm (34 mg/m^3)
- 4.3.5(d)** Nitrogen Dioxide. Measured by continuous reference method analyzer, or equivalent.
24-hour average, 0.30 ppm (565 $\mu\text{g}/\text{m}^3$)
1-hour average, 1.20 ppm (2260 $\mu\text{g}/\text{m}^3$)
- 4.3.5(e)** Ozone. Measured by continuous reference method analyzer, or equivalent.
1-hour average, 0.40 ppm (800 $\mu\text{g}/\text{m}^3$) (Revised February 9, 1989.)
- 4.3.6** Emergency. When the following concentrations of air contaminants have been reached or due to meteorological conditions can be expected to reach or exceed these levels at any monitoring site in the County for a period of twelve (12) hours or more unless control actions are taken, the Health Officer shall declare an Emergency: (Reference Methods updated February 9, 1989.)
- 4.3.6(a)** Sulfur Dioxide. Measured by continuous reference method analyzer, or equivalent.
24-hour average, 0.8 ppm (2100 $\mu\text{g}/\text{m}^3$) (Adopted February 8, 1989.)
- 4.3.6(b)** PM₁₀. Measured by a PM₁₀ sampler, 24 hour accumulation.
24 hour average, 500 $\mu\text{g}/\text{m}^3$ (Adopted February 8, 1989.)

4.3.6(c) Carbon Monoxide. Measured by continuous reference method analyzer, or equivalent.

8-hour average, 40 ppm (46 mg/m³)

4.3.6(d) Nitrogen Dioxide. Measured by continuous reference method analyzer, or equivalent.

24-hour average, 0.40 ppm (750 µg/m³)

1-hour average, 1.60 ppm (3000 µg/m³)

4.3.6(e) Ozone. Measured by continuous reference method analyzer, or equivalent.

1-hour average, 0.50 ppm (1000 µg/m³) (Adopted February 8, 1989.)

4.3.7 Termination.

4.3.7(a) The status reached by application of the Episode Criteria of this part shall remain in effect until the criteria for that level is no longer met. At such time, the next lower status will be assumed and such changes declared by the Health Officer. Specifically:

4.3.7(a)(1) When ambient contaminant concentrations fall below the critical levels for the stage, and a downward trend of concentration is established; and

4.3.7(a)(2) When meteorological conditions that attend the high concentrations are no longer called for in official weather predictions.

4.3.7(b) A public declaration will take on one of the following forms:

4.3.7(b)(1) Terminate "Emergency Status," resume "Warning Status" or "Alert Status," whichever is appropriate.

4.3.7(b)(2) Terminate "Warning Status," resume "Alert Status" or appropriate stage.

4.3.7(b)(3) Terminate "Episode Status."

4.3.7(c) Upon termination of an "Episode Status," the Air Pollution Control Program will remain on internal "Episode Watch" until a return to normal operation is announced by the Health Officer.

4.3.8 Status Declaration Authority. The Health Officer, or his specific designee, shall have the authority to make an announcement of internal Episode Watch, and public declarations of Alert, Warning, and Emergency Status.

4.4 Special Episode Criteria.

4.4.1 The Health Officer shall have the authority to declare episodic conditions when the atmospheric concentration of a single contaminant or that of a specific locality within the County show elevated concentrations.

4.4.2 Specific Pollutant Situations. When concentrations of one or two contaminants reach or exceed the defined criteria levels, and concentration of other contaminants remain substantially below 50 percent of Alert levels, and meteorological conditions are such that these specific contaminant concentrations can be expected to remain at the above levels for 12 hours or more or increase unless control action is taken, a Specific Alert, Warning or Emergency Status shall be declared by the Health Officer, naming the contaminants that meet the respective criteria. In such instances when two contaminants meet different criteria, the Health Officer shall declare the status for the episode having the higher level, and that an Episode Watch is being maintained on the remaining contaminants.

4.4.3 Specific Locality Situation. The Health Officer shall, when high concentrations of one or more contaminants measured at one monitoring site and not others and the effect is judged to originate from an identifiable source near the given site, declare the appropriate local Alert, Warning, or Emergency Status for the delineated area and that an Episode Watch is in effect for any remaining portion of the jurisdictional area while meteorological conditions favor the maintenance or increase of said high concentration for at least twelve (12) hours or more unless control action is taken.

4.5 Emission Reduction Plans.

Upon declaring an Episode Watch, Alert, Warning and Emergency, the Health Officer shall order persons responsible for the operation of a source of air contaminants causing or contributing to such episode to take the general measures outlined in the Emergency Episode Plan for the State of Alabama (dated November, 1971, prepared by TRW, Inc.) or revision thereof, as he deems appropriate, in addition to all specific source curtailments designated by him.

4.6 Two Contaminant Episode.

The Health Officer shall declare an Alert, Warning, or Emergency Status specific for two contaminants when the ambient concentrations of two contaminants simultaneously reach or exceed their respective Episode Criteria for this Chapter and meteorological conditions are such that contaminant concentrations can be expected to remain at those criteria levels for twelve (12) or more hours or increase unless control actions are taken. When criteria levels correspond to different episode status for two contaminants, the Health Officer shall declare the status of the higher of the two.

4.7 General Episodes.

The Health Officer shall, in the event that ambient concentrations of three (3) or more contaminants simultaneously reach or exceed their respective Episode Criteria and no improvement in meteorological conditions is forecast for the next twelve (12) hours, declare a General Alert, Warning, or Emergency Status. In the event the criteria levels correspond to different statuses for each contaminant, the Health Officer shall declare a general status corresponding to the highest individual status.

4.8 Emission Reduction Plan for Local Episodes.

4.8.1 The Health Officer shall specify the area of the County affected when a Local Alert, Warning or Emergency Status is declared, or when an Accidental Episode for Common Contaminants occurs, based upon air quality and meteorological reports and predictions.

4.8.2 When the Health Officer declares such a local episode, any person responsible for the operation from which excess emissions result, shall shut down such an operation and make repairs or alter the process as required to restore normal operations.

4.8.3 When the Health Officer declares that a Local Alert, Warning, or Emergency Status is in effect for a delineated area, corresponding general measures shall be applied as detailed in Part 4.5, depending upon which contaminant(s) is/are being emitted in excess.

4.9 Emission Reduction Plans for Other Sources.

4.9.1 Any person responsible for the operation of a source of air contaminants as determined by the Health Officer shall prepare standby plans for reducing the emissions of air contaminants during periods of an Episode Alert, Warning, and Emergency. Standby plans shall be designed to reduce or eliminate emissions of air contaminants in accordance with the objectives set forth in Part 4.5.

4.9.2 Any person responsible for the operation of a source of air contaminants not designated by the Health Officer shall, when requested by the Health Officer in writing, prepare standby plans for reducing the emission of air contaminants during periods of Episode Alert, Warning, and Emergency. Standby plans shall be designed to reduce or eliminate emissions of air contaminants in accordance with the objectives set forth in Part 4.5.

4.9.3 Standby plans as required under Sections 4.9.1 and 4.9.2 shall be in writing and identify the sources of air contaminants, the amount of reduction of contaminants and a brief description of the manner in which reduction will be achieved during Episodes of Alert, Warning and Emergency. (Revised February 9, 1989.)

4.9.4 During Episodes of Alert, Warning, and Emergency Status, standby plans as required by this Chapter shall be made available on the premises to any person authorized to enforce the provisions of applicable rules and regulations.

4.9.5 Standby plans as required by these rules and regulations shall be submitted to the Health Officer upon request within thirty (30) days of the receipt of such request; such standby plans shall be subject to review and approval by the Health Officer. If, in the opinion of the Health Officer, a standby plan does not effectively carry out the objectives as set forth in these rules and regulations, the Health Officer may disapprove it, state the reason for disapproval and order the preparation of an amended standby plan within the time period specified in the order.

CHAPTER 5 – CONTROL OF OPEN BURNING AND INCINERATION

(Adopted January 28, 1972. Revised November 13, 1985; September 11, 1991; March 11, 1998; July 14, 1999; June 14, 2000; May 2, 2001; May 8, 2002; November 12, 2003; May 19, 2004; May 10, 2006; May 12, 2010; May 8, 2013; May 11, 2016; and August 14, 2024)

5.1 Open Burning.

5.1.1 No person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire except as follows:

5.1.1(a) The following which require no written authorization from the Health Officer or advance notification to the Health Officer:

5.1.1(a)(1) Open fires for the cooking of food for human consumption on other than commercial premises;

5.1.1(a)(2) Fires to abate a fire hazard, providing the hazard is so declared by the fire department or fire district having jurisdiction;

5.1.1(a)(3) Fires set in salamanders or other devices used by individuals for heating purposes, provided that warming fires are contained in a noncombustible container, and further provided that materials burned are clean wood, or fuel appropriate to the heating device.

5.1.1(b) The following which require written notification to the Health Officer prior to the event:

5.1.1(b)(1) Fires for recreational or ceremonial purposes;

5.1.1(b)(2) Fires for training personnel in the methods of fighting fires. Written notification shall be made at least 10 days prior to the exercise. If the exercise includes demolition of a structure, the demolition shall comply with Section 14.2.12 of these regulations;

5.1.1(c) The following which require written authorization from the Health Officer prior to the event:

5.1.1(c)(1) Fires for recognized agricultural, silvicultural, range and wildlife management practices;

5.1.1(c)(2) Fires for prevention or control of disease or pests, where no other practical or effective method of control is available;

5.1.1(c)(3) Fires for disposing of vegetation grown on that tract of land provided that no written authorizations shall be issued during the months of April, May, June, July, August, September and October of each year. (See section 5.1.2).

5.1.1(c)(4) Any other open fires specifically or expressly approved by the Health Officer.

5.1.2 Open burning shall be prohibited during April, May, June, July, August, September, and October of each year, except as allowed or authorized under the following subparagraphs of Part 5.1., Subparagraph 5.1.1(a)(1), (a)(2), (b)(1), (c)(2), and (c)(4).

5.1.3 The open burning of materials other than vegetation or untreated wood, except as otherwise provided for in these regulations, is at all times prohibited.

5.1.4 Anyone igniting or maintaining an open fire allowed or authorized under the conditions above is responsible for compliance with any other fire control regulations, to include the obtaining of permits or permission from local fire jurisdictions and the Alabama Forestry Commission.

5.1.5 Open burning under Section 5.1.1 of Part 5.1 shall be done in compliance with the Department's written "Guidelines and Standard Operating Procedures for Issuance of Open Burning Authorizations," as the same may be amended or revised. This document is incorporated by reference into Part 5.1.

5.1.6 No open burning shall be allowed or authorized during any stage of an air pollution episode, as defined in Chapter 4 of these regulations. All open burning shall be extinguished upon the declaration of an air pollution episode watch, alert, warning, or emergency by the Health Officer. No open burning shall resume until the full termination of all episode stages.

5.1.7 Open burning within any particulate matter non-attainment area, including any past or current designated non-attainment area, shall require the use of the air curtain incinerator (trench burner) method, or equivalent, as specified by the written authorization issued for such open burning.

5.1.8 Open burning that could interfere with or affect the data or information collected at an air monitoring site operated by the EPA or the Department is at all times prohibited.

5.2 Incinerators.

5.2.1 Incinerators shall be designed and operated in such manner as is necessary to prevent the emission of objectionable odors.

5.2.2 No person shall cause or permit to be emitted into the open air from any incinerator, particulate matter in the exhaust gases to exceed 0.20 pounds per 100 pounds of refuse charged, provided that for incinerators of more than 50 tons per day charging rate, particulate matter in the exhaust gases may not exceed 0.10 pounds per 100 pounds refuse charged.

5.2.3 Emission tests shall be conducted at maximum burning capacity of the incinerator.

5.2.4 The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Health Officer in accordance with good engineering practices. In case of conflict, the determination made by the Health Officer shall govern.

5.2.5 For the purposes of this Part, the total of the capacities of all furnaces within one system shall be considered as the incinerator capacity.

5.3 Incineration of Wood, Peanut, and Cotton Ginning Wastes.

5.3.1 No person shall cause or permit to be emitted into the open air from any incinerator which incinerates wood, peanut, or cotton ginning wastes, particulate matter in the exhaust gases to exceed 0.40 pounds per 100 pounds of material charged.

5.3.2 Emission tests shall be conducted at maximum burning capacity of the incinerator.

5.3.3 The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Health Officer in accordance with good engineering practices. In case of conflict, the determination made by the Health Officer shall govern.

5.3.4 For the purposes of this Part, the total of the capacities of all furnaces within one system shall be considered as the incinerator capacity.

5.3.5 Each incinerator subject to this Part shall be properly designed, equipped, and maintained for its maximum burning capacity, and shall be equipped with a temperature recorder which shall be operated continuously with the incinerator and the temperature records shall be made available for inspection at the request of the Health Officer and shall either; (a) be equipped with an underfire forced air system, which shall be electronically controlled to insure the optimum temperature range for the complete combustion of the amount and type of material waste being charged into the incinerator; and a variable damper; or (b) consist of an all metal shell with refractory lining, circular furnace, and a built-in cinder catching system for either reburning or other disposition; all primary combustion air shall be supplied under pressure through nozzle openings located around the periphery of the lower furnace; over-fire air shall be provided under pressure through ports which shall be directed downward and tangentially in the same direction as the primary air; cinder collection shall be accomplished by the provision of openings through the shell located above the furnace section.

5.4 Incineration of Hospital/Medical/Infectious/ Waste.

5.4.1 For the purpose of this Rule, the following definitions apply:

5.4.1(a) "Batch HMIWI" means an HMIWI that is designed such that neither waste charging nor ash removal can occur during combustion.

5.4.1(b) "Biologicals" means preparations made from living organisms and their products, including vaccines, cultures, etc., intended for use in diagnosing, immunizing, or treating humans or animals or in research pertaining thereto.

5.4.1(c) "Blood products" means any product derived from human blood, including but not limited to blood plasma, platelets, red or white blood corpuscles, and other derived licensed products, such as interferon, etc.

5.4.1(d) "Body fluids" means liquid emanating or derived from humans and limited to blood; dialysate; amniotic, cerebrospinal, synovial, pleural, peritoneal and pericardial fluids; and semen and vaginal secretions.

- 5.4.1(e)** "Bypass stack" means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.
- 5.4.1(f)** "Chemotherapeutic waste" means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.
- 5.4.1(g)** "Co-fired combustor" means a unit combusting hospital waste and/or medical/infectious waste with other fuels or wastes (e.g., coal, municipal solid waste) and subject to an enforceable requirement limiting the unit to combusting a fuel feed stream, 10 percent or less of the weight of which is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar quarter basis. For purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered "other" wastes when calculating the percentage of hospital waste and medical/infectious waste combusted.
- 5.4.1(h)** "Continuous emission monitoring system or CEMS" means a monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility.
- 5.4.1(i)** "Continuous HMIWI" means an HMIWI that is designed to allow waste charging and ash removal during combustion.
- 5.4.1(j)** "Dioxins/furans" means the combined emissions of tetra- through octa-chlorinated dibenzo-para-dioxins and dibenzofurans, as measured by EPA Reference Method 23.
- 5.4.1(k)** "Dry scrubber" means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gases in the HMIWI exhaust stream forming a dry powder material.
- 5.4.1(l)** "Fabric filter or baghouse" means an add-on air pollution control system that removes particulate matter (PM) and nonvaporous metals emissions by passing flue gas through filter bags.
- 5.4.1(m)** "High-air phase" means the stage of the batch operating cycle when the primary chamber reaches and maintains maximum operating temperatures.
- 5.4.1(n)** "Hospital" means any facility which has an organized medical staff, maintains at least six inpatient beds, and where the primary function of the institution is to provide diagnostic and therapeutic patient services and continuous nursing care primarily to human inpatients who are not related and who stay on average in excess of 24 hours per admission. This definition does not include facilities maintained for the sole purpose of providing nursing or convalescent care to human patients who generally are not acutely ill but who require continuing medical supervision.
- 5.4.1(o)** "Hospital/medical/infectious waste incinerator or HMIWI or HMIWI unit" means any device that combusts any amount of hospital waste and/or medical/ infectious waste.
- 5.4.1(p)** "Hospital/medical/infectious waste incinerator operator or HMIWI operator" means any person who operates, controls or supervises the day-to-day operation of an HMIWI.
- 5.4.1(q)** "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.
- 5.4.1(r)** "Infectious agent" means any organism (such as a virus or bacteria) that is capable of being communicated by invasion and multiplication in body tissues and capable of causing disease or adverse health impacts in humans.
- 5.4.1(s)** "Intermittent HMIWI" means an HMIWI that is designed to allow waste charging, but not ash removal, during combustion.
- 5.4.1(t)** "Large HMIWI" means:
- 5.4.1(t)(1)** Except as provided in Subparagraph 5.4.1(t)(2);
- 5.4.1(t)(1)(i)** An HMIWI whose maximum design waste burning capacity is more than 500 pounds per hour; or
- 5.4.1(t)(1)(ii)** A continuous or intermittent HMIWI whose maximum charge rate is more than 500 pounds per hour; or
- 5.4.1(t)(1)(iii)** A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day.
- 5.4.1(t)(2)** The following are not large HMIWI:

5.4.1(t)(2)(i) A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 500 pounds per hour; or

5.4.1(t)(2)(ii) A batch HMIWI whose maximum charge rate is less than or equal to 4,000 pounds per day.

5.4.1(u) "Low-level radioactive waste" means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 [42 U.S.C. 2014(e)(2)].

5.4.1(v) "Maximum charge rate" means:

5.4.1(v)(1) For continuous and intermittent HMIWI, 110 percent of the lowest 3-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

5.4.1(v)(2) For batch HMIWI, 110 percent of the lowest daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

5.4.1(w) "Maximum design waste burning capacity" means:

5.4.1(w)(1) For intermittent and continuous HMIWI,

$$C = PV \times 15,000/8,500$$

Where:

C = HMIWI capacity, lb/hr

PV = primary chamber volume, ft³

15,000 = primary chamber heat release rate factor, Btu/ft³/hr

8,500 = standard waste heating value, Btu/lb;

5.4.1(w)(2) For batch HMIWI,

$$C = PV \times 4.5/8$$

Where:

C = HMIWI capacity, lb/hr

PV = primary chamber volume, ft³

4.5 = waste density, lb/ft³

8 = typical hours of operation of a batch HMIWI, hours.

5.4.1(x) "Maximum fabric filter inlet temperature" means 110 percent of the lowest 3-hour average temperature at the inlet to the fabric filter (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.

5.4.1(y) "Maximum flue gas temperature" means 110 percent of the lowest 3-hour average temperature at the outlet from the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the mercury (Hg) emission limit.

5.4.1(z) "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 below: The definition of medical/ infectious waste does not include hazardous waste identified or listed under the regulations in ADEM Admin. Code R. 335-14-2; household waste, as defined in ADEM Admin. Code R. 335-14-2-.01(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 ADEM Admin. Code R. 335-14-2-.01(4)(a)1.

5.4.1(z)(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.

5.4.1(z)(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.

- 5.4.1(z)(3)** Human blood and blood products including:
- 5.4.1(z)(3)(i)** Liquid waste human blood;
 - 5.4.1(z)(3)(ii)** Products of blood;
 - 5.4.1(z)(3)(iii)** Items saturated and/or dripping with human blood; or
 - 5.4.1(z)(3)(iv)** Items that were saturated and/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 either patient care, testing and laboratory analysis or the development of pharmaceuticals. Intravenous bags are also included in this category.
- 5.4.1(z)(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.
- 5.4.1(z)(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.
- 5.4.1(z)(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 isolated animals known to be infected with highly communicable diseases.
- 5.4.1(z)(7)** Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.
- 5.4.1(aa)** "Medium HMIWI" means:
- 5.4.1(aa)(1)** Except as provided in Subparagraph 5.4.1(aa)(2);
 - 5.4.1(aa)(1)(i)** 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
 - 5.4.1(aa)(1)(ii)** 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
 - 5.4.1(aa)(1)(iii)** 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.
 - 5.4.1(aa)(2)** The following are not medium HMIWI:
 - 5.4.1(aa)(2)(i)** A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour or more than 500 pounds per hour; or
 - 5.4.1(aa)(2)(ii)** A batch HMIWI whose maximum charge rate is more than 4,000 pounds per day or less than or equal to 1,600 pounds per day.
 - 5.4.1(bb)** "Minimum dioxin/furan sorbent flow rate" means 90 percent of the highest 3-hour average dioxin/furan sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.
 - 5.4.1(cc)** "Minimum Hg sorbent flow rate" means 90 percent of the highest 3-hour average Hg sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit.
 - 5.4.1(dd)** "Minimum hydrogen chloride (HCl) sorbent flow rate" means 90 percent of the highest 3-hour average HCl sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit.
 - 5.4.1(ee)** "Minimum horsepower or amperage" means 90 percent of the highest 3-hour average horsepower or amperage to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limits.

- 5.4.1(ff)** "Minimum pressure drop across the wet scrubber" means 90 percent of the highest 3-hour average pressure drop across the wet scrubber PM control device (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM emission limit.
- 5.4.1(gg)** "Minimum scrubber liquor flow rate" means 90 percent of the highest 3-hour average liquor flow rate at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all applicable emission limits.
- 5.4.1(hh)** "Minimum scrubber liquor pH" means 90 percent of the highest 3-hour average liquor pH at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the HCl emission limit.
- 5.4.1(ii)** "Minimum secondary chamber temperature" means 90 percent of the highest 3-hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, CO, or dioxin/furan emission limits.
- 5.4.1(jj)** "Modification or Modified HMIWI" means any change to an HMIWI unit after the effective date of these Rules such that:
- 5.4.1(jj)(1)** The cumulative costs of the modifications, over the life of the unit, exceed 50 per centum of the original cost of the construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs, or
- 5.4.1(jj)(2)** The change involves a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under §§129 or 111.
- 5.4.1(kk)** "Operating day" means a 24-hour period between 12:00 midnight and the following midnight during which any amount of hospital waste or medical/ infectious waste is combusted at any time in the HMIWI.
- 5.4.1(ll)** "Operation" means the period during which waste is combusted in the incinerator excluding periods of startup or shutdown.
- 5.4.1(mm)** "Particulate matter or PM" means the total particulate matter emitted from an HMIWI as measured by EPA Reference Method 5 or EPA Reference Method 29.
- 5.4.1(nn)** "Pathological waste" means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).
- 5.4.1(oo)** "Primary chamber" means the chamber in an HMIWI that receives waste material, in which the waste is ignited, and from which ash is removed.
- 5.4.1(pp)** "Pyrolysis" means the endothermic gasification of hospital waste and/or medical/infectious waste using external energy.
- 5.4.1(qq)** "Responsible Official" means one of the following:
- 5.4.1(qq)(1)** For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
- 5.4.1(qq)(1)(i)** The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
- 5.4.1(qq)(1)(ii)** The delegation of authority to such representatives is approved in advance by the Department;
- 5.4.1(qq)(2)** For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- 5.4.1(qq)(3)** For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this Rule, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or
- 5.4.1(qq)(4)** For affected sources: the designated representative for any other purposes under this Rule.

- 5.4.1(rr)** "Secondary chamber" means a component of the HMIWI that receives combustion gases from the primary chamber and in which the combustion process is completed.
- 5.4.1(ss)** "Shutdown" means the period of time after all waste has been combusted in the primary chamber. For continuous HMIWI, shutdown shall commence no less than 2 hours after the last charge to the incinerator. For intermittent HMIWI, shutdown shall commence no less than 4 hours after the last charge to the incinerator. For batch HMIWI, shutdown shall commence no less than 5 hours after the high-air phase of combustion has been completed.
- 5.4.1(tt)** "Small HMIWI" means:
- 5.4.1(tt)(1)** Except as provided in Subparagraph 5.4.1(tt)(2);
- 5.4.1(tt)(1)(i)** An HMIWI whose maximum design waste burning capacity is less than or equal to 200 pounds per hour; or
- 5.4.1(tt)(1)(ii)** A continuous or intermittent HMIWI whose maximum charge rate is less than or equal to 200 pounds per hour; or
- 5.4.1(tt)(1)(iii)** A batch HMIWI whose maximum charge rate is less than or equal to 1,600 pounds per day.
- 5.4.1(tt)(2)** The following are not small HMIWI:
- 5.4.1(tt)(2)(i)** A continuous or intermittent HMIWI whose maximum charge rate is more than 200 pounds per hour;
- 5.4.1(tt)(2)(ii)** A batch HMIWI whose maximum charge rate is more than 1,600 pounds per day.
- 5.4.1(uu)** "Standard conditions" means a temperature of 20 °C and a pressure of 101.3 kilopascals.
- 5.4.1(vv)** "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 (see 40 CFR §60.17).
- 5.4.1(ww)** "Startup" means the period of time between the activation of the system and the first charge to the unit. For batch HMIWI, startup means the period of time between activation of the system and ignition of the waste.
- 5.4.1(xx)** "Wet scrubber" means an add-on air pollution control device that utilizes an alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.
- 5.4.2** Applicability.
- 5.4.2(a)** Except as provided in Paragraphs 5.4.2(b) through 5.4.2(h) of Section 5.4.2, the designated facility to which this Rule applies is each individual HMIWI for which construction was commenced on or before June 20, 1996.
- 5.4.2(b)** A combustor is not subject to this Rule during periods when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned, provided the owner or operator of the combustor:
- 5.4.2(b)(1)** Notifies the Director of an exemption claim [see Appendix E]; and
- 5.4.2(b)(2)** keeps records on a calendar quarter basis of the periods of time when only pathological waste, low-level radioactive waste, and/or chemotherapeutic waste is burned.
- 5.4.2(c)** Any co-fired combustor is not subject to this Rule if the owner or operator of the co-fired combustor:
- 5.4.2(c)(1)** Notifies the Director of an exemption claim [see Appendix E];
- 5.4.2(c)(2)** provides an estimate of the relative weight of hospital waste, medical/ infectious waste, and other fuels and/or wastes to be combusted; and
- 5.4.2(c)(3)** 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.
- 5.4.2(d)** Any combustor required to have a permit under §3005 of the Solid Waste Disposal Act is not subject to this Rule.
- 5.4.2(e)** Any combustor which meets the applicability requirements under 40 CFR 60, Subpart Cb, Ea, or Eb [Jefferson County Board of Health Air Pollution Control Rules and Regulations, Paragraphs 13.2.3(a) and 13.2.3(b)] (standards or guidelines for certain municipal waste combustors) is not subject to this Rule.
- 5.4.2(f)** Any pyrolysis unit is not subject to this Rule.

- 5.4.2(g)** Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this Rule.
- 5.4.2(h)** Physical or operational changes made to an existing HMIWI unit solely for the purpose of complying with this Rule are not considered a modification and do not result in an existing HMIWI unit becoming subject to the provisions of 40 CFR 60, Subpart Ec [Jefferson County Board of Health Air Pollution Control Rules and Regulations, Paragraph 13.2.3(c)].
- 5.4.2(i)** Each existing HMIWI is subject to the permitting requirements in Chapter 18. Each owner and operator of an existing HMIWI shall submit a Major Source Operating Permit application to the Department by December 15, 1999.
- 5.4.2(j)** Beginning September 15, 2000, designated facilities subject to this Rule shall operate pursuant to a permit issued under Chapter 18.
- 5.4.3** Emission limits.
- 5.4.3(a)** On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain stack emissions in excess of the limits presented in Table 1 of this section. The emission limits in Table 2 apply to any small HMIWI which is located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (SMSA) and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste. The 2,000 lb/week limitation does not apply during performance tests.
- 5.4.3(b)** On and after 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, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from the stack of that affected facility any gases that exhibit greater than 10 percent opacity (6-minute block average).

TABLE 1. EMISSION LIMITS FOR SMALL, MEDIUM, AND LARGE HMIWI

Pollutant	Units	Emission Limits		
	(7 percent oxygen, dry basis)	HMIWI Size		
		Small	Medium	Large
Particulate Matter	Milligrams per dry standard cubic meter	115	69	34
	(grains per dry standard cubic foot)	(0.05)	(0.03)	(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)	125 (55)	125 (55)	125 (55)
	or nanograms per dry standard cubic meter total dioxins/furans TEQ (grains per billion dry standard cubic feet)	or 2.3 (1.0)	or 2.3 (1.0)	or 2.3 (1.0)
Hydrogen Chloride	Parts per million by volume or percent reduction	100 or 93%	100 or 93%	100 or 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)	1.2 (0.52)	1.2 (0.52)	1.2 (0.52)
	or percent reduction	or 70%	or 70%	or 70%
Cadmium	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	0.16 (0.07)	0.16 (0.07)	0.16 (0.07)
	or percent reduction	or 65%	or 65%	or 65%
Mercury	Milligrams per dry standard cubic meter (grains per thousand dry standard cubic feet)	0.55 (0.24)	0.55 (0.24)	0.55 (0.24)
	or percent reduction	or 85%	or 85%	or 85%

TABLE 2. EMISSION LIMITS FOR SMALL HMIWI

Pollutant	Units (7 percent oxygen, dry basis)	HMIWI Emission Limits
Particulate Matter	Milligrams per dry standard cubic meter	197
	(grains per dry standard cubic foot)	(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)	800 (350)
	or nanograms per dry standard cubic meter total dioxins/furans TEQ (grains per billion dry standard cubic feet)	or 15 (6.6)
Hydrogen Chloride	Parts per million by volume or percent reduction	3,100
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)

5.4.4 Operator Training and Qualification Requirements.

5.4.4(a) Compliance with the requirements of this paragraph shall occur no later than one year after EPA approval of these Rules.

5.4.4(b) No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within 1 hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.

5.4.4(c) Operator training and qualification shall be obtained through a State-approved program that meets the requirements included in Paragraphs (d) through (k) of this section.

5.4.4(d) Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

5.4.4(d)(1) 24 hours of training on the following subjects:

5.4.4(d)(1)(i) Environmental concerns, including pathogen destruction and types of emissions;

5.4.4(d)(1)(ii) Basic combustion principles, including products of combustion;

5.4.4(d)(1)(iii) Operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

5.4.4(d)(1)(iv) Combustion controls and monitoring;

5.4.4(d)(1)(v) Operation of air pollution control equipment and factors affecting performance (if applicable);

5.4.4(d)(1)(vi) Methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures (where applicable);

5.4.4(d)(1)(vii) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;

5.4.4(d)(1)(viii) Bottom and fly ash characteristics and handling procedures;

5.4.4(d)(1)(ix) Applicable Federal, State, and local regulations;

- 5.4.4(d)(1)(x) Work safety procedures;
- 5.4.4(d)(1)(xi) Pre-startup inspections; and
- 5.4.4(d)(1)(xii) Recordkeeping requirements.
- 5.4.4(d)(2) An examination designed and administered by the instructor.
- 5.4.4(d)(3) Reference material distributed to the attendees covering the course topics.
- 5.4.4(e) Qualification shall be obtained by:
 - 5.4.4(e)(1) Completion of a training course that satisfies the criteria under paragraph (d) of this section; and
 - 5.4.4(e)(2) Either 6 months experience as an HMIWI operator, 6 months experience as a direct supervisor of an HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators.
- 5.4.4(f) Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.
- 5.4.4(g) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least 4 hours covering, at a minimum, the following:
 - 5.4.4(g)(1) Update of regulations;
 - 5.4.4(g)(2) Incinerator operation, including startup and shutdown procedures;
 - 5.4.4(g)(3) Inspection and maintenance;
 - 5.4.4(g)(4) Discussion of operating problems encountered by attendees.
- 5.4.4(h) A lapsed qualification shall be renewed by one of the following methods:
 - 5.4.4(h)(1) For a lapse of less than 3 years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (g) of this section above.
 - 5.4.4(h)(2) For a lapse of 3 years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in Paragraph (d) of this Section above.
- 5.4.4(i) The owner or operator of an affected facility shall maintain documentation at the facility that address the following:
 - 5.4.4(i)(1) Summary of the applicable standards under this Rule;
 - 5.4.4(i)(2) Description of basic combustion theory applicable to an HMIWI;
 - 5.4.4(i)(3) Procedures for receiving, handling, and charging waste;
 - 5.4.4(i)(4) HMIWI startup, or shutdown procedures;
 - 5.4.4(i)(5) Procedures for maintaining proper combustion air supply levels;
 - 5.4.4(i)(6) Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this Rule;
 - 5.4.4(i)(7) Procedures for monitoring HMIWI emissions;
 - 5.4.4(i)(8) Reporting and recordkeeping procedures; and
 - 5.4.4(i)(9) Procedures for handling ash.
- 5.4.4(j) The owner or operator of an affected facility shall establish a program for reviewing the information listed in Paragraph (i) of this Section annually with each HMIWI operator.
 - 5.4.4(j)(1) The initial review of the information listed in Paragraph (i) of this Section shall be conducted within 6 months after EPA approval of these Rules or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.
 - 5.4.4(j)(2) Subsequent reviews of the information listed in Paragraph (i) of this Section shall be conducted annually.

5.4.4(k) The information listed in Paragraph (i) of this Section shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training shall be available for inspection by the Department.

5.4.5 Waste Management Guidelines.

The owner or operator of an affected facility shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as paper, cardboard, plastics, glass, battery, or metal recycling; or purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The American Hospital Association publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" shall be considered in the development of the waste management plan.

5.4.6 Inspection Guidelines.

5.4.6(a) The requirements of this paragraph apply to small HMIWI subject to the emission limits in Table 2 of Section 5.4.3.

5.4.6(b) Within one year of EPA approval of these Rules and annually thereafter (no more than 12 months following the previous annual equipment inspection) an equipment inspection shall be performed.

5.4.6(b)(1) At a minimum, an inspection shall include the following:

5.4.6(b)(1)(i) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation; clean pilot flame sensor, as necessary;

5.4.6(b)(1)(ii) Ensure proper adjustment of primary and secondary chamber combustion air, and adjust as necessary;

5.4.6(b)(1)(iii) Inspect hinges and door latches, and lubricate as necessary;

5.4.6(b)(1)(iv) Inspect dampers, fans, and blowers for proper operation;

5.4.6(b)(1)(v) Inspect HMIWI door and door gaskets for proper sealing;

5.4.6(b)(1)(vi) Inspect motors for proper operation;

5.4.6(b)(1)(vii) Inspect primary chamber refractory lining; clean and repair/replace lining as necessary;

5.4.6(b)(1)(viii) Inspect incinerator shell for corrosion and/or hot spots;

5.4.6(b)(1)(ix) Inspect secondary/tertiary chamber and stack, clean as necessary;

5.4.6(b)(1)(x) Inspect mechanical loader, including limit switches, for proper operation, if applicable;

5.4.6(b)(1)(xi) Visually inspect waste bed (grates), and repair/seal, as appropriate;

5.4.6(b)(1)(xii) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

5.4.6(b)(1)(xiii) Inspect air pollution control device(s) for proper operation, if applicable;

5.4.6(b)(1)(xiv) Inspect waste heat boiler systems to ensure proper operation, if applicable;

5.4.6(b)(1)(xv) Inspect bypass stack components;

5.4.6(b)(1)(xvi) Ensure proper calibration of thermocouples, sorbent feed systems and any other monitoring equipment; and

5.4.6(b)(1)(xvii) Generally observe that the equipment is maintained in good operating condition.

5.4.6(b)(2) Within 10 operating days following an equipment inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department establishing a date whereby all necessary repairs of the designated facility shall be completed.

5.4.7 Compliance and Performance Testing.

- 5.4.7(a)** The emission limits under this Rule apply at all times except during periods of startup or shutdown, provided that no hospital waste or medical/infectious waste is charged to the affected facility during startup or shutdown.
- 5.4.7(b)** The owner or operator of an affected facility shall conduct an initial performance test as required under 40 CFR 60.8 to determine compliance with the emission limits using the procedures and test methods listed in Subparagraphs 5.4.7(b)(1) through (11). The use of the bypass stack during a performance test shall invalidate the performance test.
- 5.4.7(b)(1)** All performance tests shall consist of a minimum of three test runs conducted under representative operating conditions.
- 5.4.7(b)(2)** The minimum sample time shall be 1 hour per test run unless otherwise indicated.
- 5.4.7(b)(3)** EPA Reference Method 1 of Appendix A of 40 CFR 60 shall be used to select the sampling location and number of traverse points.
- 5.4.7(b)(4)** EPA Reference Method 3, 3A or 3B of Appendix A of 40 CFR 60 shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3, 3A or 3B of Appendix A of 40 CFR 60 shall be used simultaneously with each reference method.
- 5.4.7(b)(5)** The pollutant concentrations shall be adjusted to 7 percent oxygen using the following equation:

$$C_{adj} = C_{meas}(20.9 - 7) \div (20.9 - \%O_2)$$

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis (20.9 - 7) = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

- 5.4.7(b)(6)** EPA Reference Method 5 or 29 of Appendix A of 40 CFR 60 shall be used to measure the particulate matter emissions.
- 5.4.7(b)(7)** EPA Reference Method 9 of Appendix A of 40 CFR 60 shall be used to measure stack opacity.
- 5.4.7(b)(8)** EPA Reference Method 10 or 10B of Appendix A of 40 CFR 60 shall be used to measure the CO emissions.
- 5.4.7(b)(9)** EPA Reference Method 23 of Appendix A of 40 CFR 60 shall be used to measure total dioxin/furan emissions. The minimum sample time shall be 4 hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans, under Section 5.4.3 of this Rule, the following procedures shall be used to determine compliance:
- 5.4.7(b)(9)(i)** Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Reference Method 23.
- 5.4.7(b)(9)(ii)** For each dioxin/furan congener measured in accordance with Subdivision 5.4.7(b)(9)(i), multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this Rule.
- 5.4.7(b)(9)(iii)** Sum the products calculated in accordance with 5.4.7(b)(9)(ii) to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

TABLE 3. TOXIC EQUIVALENCY FACTORS

Dioxin/Furan Congener	Toxic Equivalency Factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8- pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01

Dioxin/Furan Congener	Toxic Equivalency Factor
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

- 5.4.7(b)(10)** EPA Reference Method 26 or 26A of Appendix A of 40 CFR 60 shall be used to measure HCl emissions. If the affected facility has selected the percentage reduction standards for HCl under Section 5.4.3 of this Rule, the percentage reduction in HCl emissions ($\%R_{HCl}$) is computed using the following formula:

$$(\%R_{HCl}) = \frac{E_i - E_0}{E_i} \times 100$$

Where:

$\%R_{HCl}$ = percentage reduction of HCl emissions achieved;

E_i = HCl emissions concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and

E_0 = HCl emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

- 5.4.7(b)(11)** EPA Reference Method 29 of Appendix A of 40 CFR 60 shall be used to measure Pb, Cd, and Hg emissions. If the affected facility has selected the percentage reduction standards for metals under Section 5.4.3 of this Rule, the percentage reduction in emissions ($\%R_{metal}$) is computed using the following formula:

$$(\%R_{metal}) = \left(\frac{E_i - E_0}{E_i} \right) \times 100$$

Where:

$(\%R_{metal})$ = percentage reduction of metal emission (Pb, Cd, or Hg) achieved;

E_i = metal emission concentration (Pb, Cd, or Hg) measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and

E_0 = metal emission concentration (Pb, Cd, or Hg) measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

- 5.4.7(c)** Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility shall:

- 5.4.7(c)(1)** Determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in 5.4.7(b).

- 5.4.7(c)(2)** Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in 5.4.7(b). If all three performance tests over a 3-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent 2 years, if specifically approved by the Director. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for up to an additional 2 years, if specifically approved by the Director. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual

performance tests over a 3-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

- 5.4.7(c)(3)** Facilities using a CEMS to demonstrate compliance with any of the emission limits under Section 5.4.3 shall:
- 5.4.7(c)(3)(i)** Determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours (not including startup or shutdown).
- 5.4.7(c)(3)(ii)** Operate all CEMS in accordance with the applicable procedures under Appendices B and F of 40 CFR 60.
- 5.4.7(d)** The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall:
- 5.4.7(d)(1)** Establish the appropriate maximum and minimum operating parameters, indicated in Table 4 of this Rule for each control system, as site specific operating parameters during the initial performance test to determine compliance with the emission limits; and
- 5.4.7(d)(2)** Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, ensure that the affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 4 of this Rule and measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during periods of startup or shutdown. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).
- 5.4.7(e)** Except as provided in 5.4.7(h), for affected facilities equipped with a dry scrubber followed by a fabric filter:
- 5.4.7(e)(1)** Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.
- 5.4.7(e)(2)** Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.
- 5.4.7(e)(3)** Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.
- 5.4.7(e)(4)** Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.
- 5.4.7(e)(5)** Use of the bypass stack (except during startup or shutdown) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.
- 5.4.7(f)** Except as provided in 5.4.7(h), for affected facilities equipped with a wet scrubber:
- 5.4.7(f)(1)** Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM emission limit.
- 5.4.7(f)(2)** Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.
- 5.4.7(f)(3)** Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.
- 5.4.7(f)(4)** Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.
- 5.4.7(f)(5)** Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

- 5.4.7(f)(6)** Use of the bypass stack (except during startup or shutdown) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.
- 5.4.7(g)** Except as provided in 5.4.7(h), for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber:
- 5.4.7(g)(1)** Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.
- 5.4.7(g)(2)** Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.
- 5.4.7(g)(3)** Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.
- 5.4.7(g)(4)** Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.
- 5.4.7(g)(5)** Use of the bypass stack (except during startup or shutdown) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.
- 5.4.7(h)** The owner or operator of an affected facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under Paragraphs 5.4.7(e), (f), or (g).
- 5.4.7(i)** The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Section 5.4.3 of this Rule shall petition the Administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the Administrator.
- 5.4.7(j)** The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The Administrator may request a repeat performance test at any time.
- 5.4.7(k)** Any small HMIWI subject to the emission limits in Table 2 of Section 5.4.3 shall meet the following compliance and performance testing requirements:
- 5.4.7(k)(1)** Conduct the performance testing requirements in Paragraph 5.4.7(a), Subparagraphs 5.4.7(b)(1) through (b)(9), (b)(11) [Mercury only], and 5.4.7(c)(1). The 2,000 lb/week limitation does not apply during performance tests.
- 5.4.7(k)(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.
- 5.4.7(k)(3)** Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, ensure that the designated facility does not operate above the maximum charge rate or below the minimum secondary chamber temperature measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during periods of startup or shutdown. 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).
- 5.4.7(k)(4)** Except as provided in Subparagraph 5.4.7(k)(5), operation of the designated facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM, CO, and dioxin/furan emission limits.
- 5.4.7(k)(5)** The owner or operator of a designated facility 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 Subparagraph 5.4.7(k)(4).

5.4.8 Monitoring.

- 5.4.8(a)** The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 4 of this Rule such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table 4 of this Rule at all times except during periods of startup and shutdown.
- 5.4.8(b)** The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.
- 5.4.8(c)** The owner or operator of an affected facility using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Section 5.4.3 shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to Paragraph 5.4.7(i).
- 5.4.8(d)** The owner or operator of an affected 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 and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste.
- 5.4.8(e)** Any small HMIWI subject to the emission limits in Table 2 of Section 5.4.3 shall meet the following monitoring requirements:
 - 5.4.8(e)(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.
 - 5.4.8(e)(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.
 - 5.4.8(e)(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 and for 90 percent of the operating hours per calendar quarter that the designated facility is combusting hospital waste and/or medical/infectious waste.

TABLE 4. OPERATING PARAMETERS TO BE MONITORED AND MINIMUM MEASUREMENT AND RECORDING FREQUENCIES

Operating Parameters to be Monitored		Minimum Frequency		Control System		
		Data Measurement	Data Recording	Dry Scrubber followed by Fabric Filter	Wet Scrubber	Dry Scrubber followed by Fabric Filter and Wet Scrubber
Maximum Operating Parameters	Maximum charge rate	Continuous	1X /hour	√	√	√
	Maximum fabric filter inlet temperature	Continuous	1X /minute	√		√
	Maximum flue gas temperature	Continuous	1X /minute	√	√	
Minimum Operating Parameters	Minimum secondary chamber temperature	Continuous	1X /minute	√	√	√
	Minimum dioxin/furan sorbent flow rate	Hourly	1X /hour	√		√

Operating Parameters to be Monitored	Minimum Frequency		Control System		
	Data Measurement	Data Recording	Dry Scrubber followed by Fabric Filter	Wet Scrubber	Dry Scrubber followed by Fabric Filter and Wet Scrubber
Minimum HCl sorbent flow rate	Hourly	1X /hour	√		√
Minimum mercury (Hg) sorbent flow rate	Hourly	1X /hour	√		√
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to the scrubber	Continuous	1X /minute		√	√
Minimum scrubber liquor flow rate	Continuous	1X /minute		√	√
Minimum scrubber liquor pH	Continuous	1X /minute		√	√

5.4.9 Reporting and Recordkeeping Requirements.

5.4.9(a) The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years:

5.4.9(a)(1) Calendar date of each record;

5.4.9(a)(2) Records of the following data:

5.4.9(a)(2)(i) Concentrations of any pollutant listed in Section 5.4.3 or measurements of opacity as determined by the continuous emission monitoring system (if applicable);

5.4.9(a)(2)(ii) Results of fugitive emissions (by EPA Reference Method 22) tests, if applicable;

5.4.9(a)(2)(iii) HMIWI charge dates, times, and weights and hourly charge rates;

5.4.9(a)(2)(iv) Fabric filter inlet temperatures during each minute of operation, as applicable;

5.4.9(a)(2)(v) Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;

5.4.9(a)(2)(vi) Amount and type of Hg sorbent used during each hour of operation, as applicable;

5.4.9(a)(2)(vii) Amount and type of HCl sorbent used during each hour of operation, as applicable;

5.4.9(a)(2)(viii) Secondary chamber temperatures recorded during each minute of operation;

5.4.9(a)(2)(ix) Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;

5.4.9(a)(2)(x) Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;

5.4.9(a)(2)(xi) Pressure drop across the wet scrubber system during each minute of operation, as applicable,

5.4.9(a)(2)(xii) Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;

5.4.9(a)(2)(xiii) pH at the inlet to the wet scrubber during each minute of operation, as applicable,

5.4.9(a)(2)(xiv) Records indicating use of the bypass stack, including dates, times, and durations, and

- 5.4.9(a)(2)(xv)** For affected facilities complying with Paragraphs 5.4.7(i) and 5.4.8(c), the owner or operator shall maintain all operating parameter data collected.
- 5.4.9(a)(3)** Identification of calendar days for which data on emission rates or operating parameters specified under Subparagraph 5.4.9(a)(2) have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.
- 5.4.9(a)(4)** Identification of calendar days for which data on emission rates or operating parameters specified under Subparagraph 5.4.9(a)(2) exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.
- 5.4.9(a)(5)** The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.
- 5.4.9(a)(6)** Records showing the names of HMIWI operators who have completed review of the information in Paragraph 5.4.4(i) as required by Paragraph 5.4.4(j), including the date of the initial review and all subsequent annual reviews;
- 5.4.9(a)(7)** Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;
- 5.4.9(a)(8)** Records showing the names of the HMIWI operators who have met the criteria for qualification under Section 5.4.4 of this Rule and the dates of their qualification; and
- 5.4.9(a)(9)** Records of calibration of any monitoring devices as required under Paragraphs 5.4.8(a), (b), and (c) of this Rule.
- 5.4.9(b)** The owner or operator of an affected facility shall submit the information specified in Subparagraphs 5.4.9(b)(1) through (b)(3) no later than 60 days following the initial performance test. All reports shall be signed by the responsible official.
- 5.4.9(b)(1)** The initial performance test data as recorded under subparagraphs 5.4.7(b)(1) through (b)(11), as applicable.
- 5.4.9(b)(2)** The values for the site-specific operating parameters established pursuant to Paragraphs 5.4.7(d) or (i), as applicable.
- 5.4.9(b)(3)** The waste management plan as specified in Section 5.4.5 of this Rule.
- 5.4.9(c)** An annual report shall be submitted 1 year following the submission of the information in Paragraph 5.4.9(b) and subsequent reports shall be submitted no more than 12 months following the previous report (once the unit is subject to permitting requirements under Chapter 18, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in Subparagraphs 5.4.9(c)(1) through (c)(8). All reports shall be signed by the responsible official.
- 5.4.9(c)(1)** The values for the site-specific operating parameters established pursuant to Paragraph 5.4.7(d) or (i), as applicable.
- 5.4.9(c)(2)** The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to Paragraph 5.4.7(d) or (i), as applicable.
- 5.4.9(c)(3)** The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to Paragraph 5.4.7(d) or (i) for the calendar year preceding the year being reported, in order to provide the Director with a summary of the performance of the affected facility over a 2-year period.
- 5.4.9(c)(4)** Any information recorded under Subparagraphs 5.4.9(c)(3) through (c)(5) for the calendar year being reported.
- 5.4.9(c)(5)** Any information recorded under Subparagraphs 5.4.9(c)(3) through (c)(5) for the calendar year preceding the year being reported, in order to provide the Director with a summary of the performance of the affected facility over a 2-year period.
- 5.4.9(c)(6)** If a performance test was conducted during the reporting period, the results of that test.
- 5.4.9(c)(7)** If no exceedances were reported under Subparagraphs 5.4.9(c)(3) through (c)(5) for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

- 5.4.9(c)(8)** Any use of the bypass stack, the duration, reason for its use, and corrective action taken.
- 5.4.9(d)** The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under Subparagraphs 5.4.9(a)(3) through (a)(5) no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in Paragraph 5.4.9(b). Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the responsible official.
- 5.4.9(e)** All records specified under Paragraph 5.4.9(a) shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Director.
- 5.4.9(f)** Any small HMIWI subject to the emission limits in Table 2 of Section 5.4.3 shall meet the following reporting and recordkeeping requirements:
- 5.4.9(f)(1)** Maintain records of the annual equipment inspections, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the Department; and
- 5.4.9(f)(2)** Submit an annual report containing information recorded under Subparagraph 5.4.9(f)(1) 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 Chapter 18, the owner or operator must submit these reports semiannually). The report shall be signed by the responsible official.
- 5.4.10 Compliance Schedules.**
- 5.4.10(a)** Except as provided in Paragraph 5.4.10(b), designated facilities to which this Rule applies [as defined in Section 5.4.2] shall comply with all requirements of this Rule on or before the date one year after EPA approval of these Rules, regardless of whether the Department has identified a designated facility in its inventory required by §60.25(a) of 40 CFR, Subpart B.
- 5.4.10(b)** For designated facilities planning to install the necessary air pollution control equipment, the Department may allow compliance on or before the date three years after EPA approval of these Rules, but as expeditiously as possible. Within 90 days of EPA's approval of these Rules, these facilities shall petition the Department in writing, as outlined in Subparagraphs 5.4.10(b)(1) through (b)(2) below. Under no circumstances can compliance with these Rules extend beyond September 15, 2002.
- 5.4.10(b)(1)** Documentation of the analyses undertaken to support the need for an extension, including an explanation of why up to 3 years after EPA approval of these Rules is sufficient time to comply while 1 year after EPA approval of these Rules is not sufficient. The documentation shall also include an evaluation of the option to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and
- 5.4.10(b)(2)** Documentation of measurable and enforceable incremental steps of progress to be taken towards compliance with this Rule, as defined in Subdivisions 5.4.10(b)(2)(i) through (x) below:
- 5.4.10(b)(2)(i)** Date for submitting a petition for site specific operating parameters under Paragraph 5.4.7(i) of this Rule 60.56(c)(i) of 40 CFR Subpart Ec].
- 5.4.10(b)(2)(ii)** Date for obtaining services of an architectural and engineering firm regarding the air pollution control device(s);
- 5.4.10(b)(2)(iii)** Date for obtaining design drawings of the air pollution control device(s);
- 5.4.10(b)(2)(iv)** Date for ordering the air pollution control device(s);
- 5.4.10(b)(2)(v)** Date for obtaining the major components of the air pollution control device(s);
- 5.4.10(b)(2)(vi)** Date for initiation of site preparation for installation of the air pollution control device(s);
- 5.4.10(b)(2)(vii)** Date for initiation of installation of the air pollution control device(s);
- 5.4.10(b)(2)(viii)** Date for initial startup of the air pollution control device(s); and
- 5.4.10(b)(2)(ix)** Date for initial compliance test(s) of the air pollution control device(s).
- 5.4.10(b)(2)(x)** Date for final compliance.

5.4.10(c) Designated facilities planning to shut down permanently to demonstrate compliance with Paragraph 5.4.10(a) shall notify the Department in writing, within 90 days after EPA approval of these Rules. The notification shall include documentation of measurable and enforceable incremental steps of progress to be taken towards compliance with this Rule, as defined in Subparagraphs 5.4.10(c)(1) through (6) below:

5.4.10(c)(1) Date for designated facility plan for shut down;

5.4.10(c)(2) Date for contract with the appropriate vendor (off-site hauler or alternative waste treatment equipment);

5.4.10(c)(3) Date to begin construction of alternative waste treatment equipment (if applicable);

5.4.10(c)(4) Date for complete installation of alternative waste treatment equipment (if applicable);

5.4.10(c)(5) Date for shut down of incinerator;

5.4.10(c)(6) Date for dismantling incinerator.

5.4.10(d) Department Actions on Petitions. On receipt of a petition, the Department will authorize one of the following actions, as they shall determine:

5.4.10(d)(1) The petition may be dismissed if the Department determines that it is not adequate under Paragraph 5.4.10(b).

5.4.10(d)(2) The Department may grant the request of the petition, as petitioned or by imposing such conditions as these Rules may require in the Major Source Operating Permit, including the establishment of schedules of compliance.

5.4.10(d)(3) The Department may deny the petition. If such a denial is made, the Department shall notify the petitioner in writing, state the reasons for denial and outline procedures for appeal.

5.4.10(e) Termination Procedures.

Any petition granted by the Department may be terminated by the Department whenever the Department finds, after an opportunity for the petitioner to demonstrate compliance and after notice and an opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the petition or that operation under the petition does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.

5.5 Incineration of Commercial and Industrial Solid Waste.

5.5.1 Terms used but not defined in this rule are defined in 40 CFR 60, Subparts A and B, and are incorporated by reference in Chapter 13 of the Regulations. For the purposes of Part 5.5 only, the following definitions apply:

5.5.1(a) "30-day rolling average" means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.

5.5.1(b) "Administrator" means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative.

5.5.1(c) Reserved.

5.5.1(d) "Agricultural waste" means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

5.5.1(e) "Air curtain incinerator (ACI)" means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.

5.5.1(f) "Annual heat input" means the heat input for the 12 months preceding the compliance demonstration.

5.5.1(g) "Auxiliary fuel" means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

5.5.1(h) "Average annual heat input rate" means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

- 5.5.1(i)** "Bag leak detection system" means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.
- 5.5.1(j)** "Burn-off oven" means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recover unit or a small, remote incinerator under Part 5.5.
- 5.5.1(k)** "Bypass stack" means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.
- 5.5.1(l)** "Calendar quarter" means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.
- 5.5.1(m)** "Calendar year" means 365 consecutive days starting on January 1 and ending on December 31.
- 5.5.1(n)** "CEMS data during startup and shutdown" means the following:
- 5.5.1(n)(1)** For incinerators and small remote incinerators: CEMS data collected during the first hours of operation of a CISWI startup from a cold start until waste is fed into the unit and the hours of operation following the cessation of waste material being fed to the CISWI during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less.
- 5.5.1(n)(2)** For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in less;
- 5.5.1(n)(3)** For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for a least 120 minutes or when the feed rate exceeds 60% of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.
- 5.5.1(o)** "Chemical recovery unit" means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule. The following seven types of units are considered chemical recovery units:
- 5.5.1(o)(1)** Units burning only pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.
- 5.5.1(o)(2)** Units burning only spent sulfuric acid used to produce virgin sulfuric acid.
- 5.5.1(o)(3)** Units burning only wood or coal feedstock for the production of charcoal.
- 5.5.1(o)(4)** Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts.
- 5.5.1(o)(5)** Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.
- 5.5.1(o)(6)** Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

- 5.5.1(o)(7)** Units burning only photographic film to recover silver.
- 5.5.1(p)** "Chemotherapeutic waste" means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.
- 5.5.1(q)** "Clean lumber" means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.
- 5.5.1(r)** "Commercial and industrial solid waste incineration (CISWI) " means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR 241. If the operating unit burns material other than traditional fuels as defined in §241.2 that have been discarded, and the owner or operator does not keep and produce records as required by 5.5.11(u), the operating unit is a CISWI. While not all CISWIs will include all of the following components, a CISWI includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI does not include air pollution control equipment or the stack. The CISWI boundary starts at the solid waste hopper (if applicable) and extends through two areas:
- 5.5.1(r)(1)** The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any;
- 5.5.1(r)(2)** The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI includes all ash handling systems connected to the bottom ash handling system.
- 5.5.1(r)(3)** A CISWI does not include any of the types of units described in 5.5.2(d), nor does it include any combustion turbine or reciprocating internal combustion engine.
- 5.5.1(s)** "Contained gaseous material" means gases that are in a container when that container is combusted.
- 5.5.1(t)** "Continuous emission monitoring system (CEMS)" means the total equipment that may be required to meet the data acquisition and availability requirements of this rule, used to sample, condition (if applicable), analyze, and provide a record of emissions.
- 5.5.1(u)** "Continuous monitoring system (CMS)" means the total equipment, required under the emission monitoring sections in applicable rules, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.
- 5.5.1(v)** "Cyclonic barrel burner" means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air. A cyclonic burn barrel is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.
- 5.5.1(w)** "Deviation" means any instance in which an affected source subject to this rule, or an owner or operator of such a source;
- 5.5.1(w)(1)** Fails to meet any requirement or obligation established by this rule, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements; or
- 5.5.1(w)(2)** Fails to meet any term or condition that is adopted to implement an applicable requirement in this rule and that is included in the operating permit for any affected source required to obtain such a permit.
- 5.5.1(x)** "Dioxins/furans" means tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.
- 5.5.1(y)** "Discard" means, for purposes of Part 5.5 and 40 CFR 60, Subpart CCCC [incorporated by reference at Section 13.2.81], only, burned in an incineration unit without energy recovery.
- 5.5.1(z)** "Drum reclamation unit" means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.
- 5.5.1(aa)** "Dry scrubber" means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

- 5.5.1(bb)** "Energy recovery" means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.
- 5.5.1(cc)** "Energy recovery unit" means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.
- 5.5.1(dd)** "Energy recovery unit designed to burn biomass (Biomass)" means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.
- 5.5.1(ee)** "Energy recovery unit designed to burn coal (Coal)" means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.
- 5.5.1(ff)** "Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas)" means an energy recovery unit that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.
- 5.5.1(gg)** "Energy recovery unit designed to burn solid materials (Solids)" includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.
- 5.5.1(hh)** "Fabric filter" means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.
- 5.5.1(ii)** "Foundry sand thermal reclamation unit" means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.
- 5.5.1(jj)** "Incinerator" means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator under Resource Conservation and Recovery Act in 40 CFR 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.
- 5.5.1(kk)** "In-line coal mill" means those coal mills using kiln exhaust gases in their process. Coal mills with a heat source other than the kiln or coal mills using exhaust gases from the clinker cooler alone are not an in-line coal mill.
- 5.5.1(ll)** "In-line kiln/raw mill" means a system in a Portland Cement production process where dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.
- 5.5.1(mm)** "Kiln" means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypass used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the alkali bypass, in-line raw mill and in-line coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to the exhaust of the alkali bypass, in-line raw mill and in-line coal mill.
- 5.5.1(nn)** "Laboratory analysis unit" means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under Part 5.5.
- 5.5.1(oo)** "Load fraction" means the actual heat input of an energy recovery unit divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).
- 5.5.1(pp)** "Low-level radioactive waste" means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).
- 5.5.1(qq)** "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

- 5.5.1(rr)** "Minimum voltage or amperage" means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.
- 5.5.1(ss)** "Modification or modified CISWI " means a CISWI that has been changed later than August 7, 2013 and that meets one of two criteria:
- 5.5.1(ss)(1)** The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI used to calculate these costs, see the definition of CISWI; and
- 5.5.1(ss)(2)** Any physical change in the CISWI or change in the method of operating it that increases the amount of any air pollutant emitted for which §129 or §111 of the Clean Air Act has established standards.
- 5.5.1(tt)** "Municipal solid waste or municipal-type solid waste" means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).
- 5.5.1(uu)** "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
- 5.5.1(vv)** "Operating day" means a 24-hour period between 12:00 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI.
- 5.5.1(ww)** "Oxygen analyzer system" means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler/process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.
- 5.5.1(xx)** "Oxygen trim system" means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.
- 5.5.1(yy)** "Part reclamation unit" means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.
- 5.5.1(zz)** "Particulate matter" means total particulate matter emitted from CISWIs as measured by Method 5 or Method 29 of 40 CFR 60, Appendix A.
- 5.5.1(aaa)** "Pathological waste" means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).
- 5.5.1(bbb)** "Performance evaluation" means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.
- 5.5.1(ccc)** "Performance test" means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.
- 5.5.1(ddd)** "Process change" means any of the following physical or operational changes:
- 5.5.1(ddd)(1)** A physical change (maintenance activities excluded) to the CISWI which may increase the emission rate of any air pollutant to which a standard applies;
- 5.5.1(ddd)(2)** An operational change to the CISWI where a new type of non-hazardous secondary material is being combusted;

- 5.5.1(ddd)(3)** A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the CISWI (e.g., replacing an electrostatic precipitator with a fabric filter);
- 5.5.1(ddd)(4)** An operational change to the air pollution control devices used to comply with the emission limits for the affected CISWI (e.g., change in the sorbent injection rate used for activated carbon injection).
- 5.5.1(eee)** "Rack reclamation unit" means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.
- 5.5.1(fff)** "Raw mill" means a ball or tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.
- 5.5.1(ggg)** "Reconstruction" means rebuilding a CISWI and meeting two criteria:
- 5.5.1(ggg)(1)** The reconstruction begins on or after August 7, 2013.
- 5.5.1(ggg)(2)** The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI used to calculate these costs, see the definition of CISWI.
- 5.5.1(hhh)** "Refuse-derived fuel" means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:
- 5.5.1(hhh)(1)** Low-density fluff refuse-derived fuel through densified refuse-derived fuel.
- 5.5.1(hhh)(2)** Pelletized refuse-derived fuel.
- 5.5.1(iii)** "Responsible Official" means one of the following:
- 5.5.1(iii)(1)** For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
- 5.5.1(iii)(1)(i)** The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
- 5.5.1(iii)(1)(ii)** The delegation of authority to such representatives is approved in advance by the Department;
- 5.5.1(iii)(2)** For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- 5.5.1(iii)(3)** For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this rule, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or
- 5.5.1(iii)(4)** For affected facilities:
- 5.5.1(iii)(4)(i)** The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Clean Air Act or the regulations promulgated there under are concerned; or
- 5.5.1(iii)(4)(ii)** The designated representative for any other purposes under 40 CFR 60.
- 5.5.1(jjj)** "Shutdown" means the period of time after all waste has been combusted in the primary chamber.
- 5.5.1(kkk)** "Small, remote incinerator" means an incinerator that combusts waste (as that term is defined by the Administrator in 40 CFR 241 and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill).
- 5.5.1(III)** "Soil treatment unit" means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.

- 5.5.1(mmm)** "Solid waste" (as defined in 40 CFR 241.2) means any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).
- 5.5.1(nnn)** "Solid waste incineration unit" means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under §3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include:
- 5.5.1(nnn)(1)** Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;
- 5.5.1(nnn)(2)** Qualifying small power production facilities, as defined in §3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in §3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or
- 5.5.1(nnn)(3)** Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Health Officer.
- 5.5.1(ooo)** "Space heater" means a unit that meets the requirements of 40 CFR 279.23. A space heater is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this rule.
- 5.5.1(ppp)** "Standard conditions, when referring to units of measure", means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).
- 5.5.1(qqq)** "Startup period" means the period of time between the activation of the system and the first charge to the unit.
- 5.5.1(rrr)** "Waste-burning kiln" means a kiln that is heated, in whole or in part, by combusting solid waste (as the term is defined by the Administrator in 40 CFR 241). Secondary materials used in Portland cement kilns shall not be deemed to be combusted unless they are introduced into the flame zone in the hot end of the kiln or mixed with the precalciner fuel.
- 5.5.1(sss)** "Wet scrubber" means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.
- 5.5.1(ttt)** "Wood waste" means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:
- 5.5.1(ttt)(1)** Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.
- 5.5.1(ttt)(2)** Construction, renovation, or demolition wastes.
- 5.5.1(ttt)(3)** Clean lumber.
- 5.5.2** Applicability.
- 5.5.2(a)** Except as provided in Paragraph 5.5.2(b) below, the designated facility to which this rule applies is each individual CISWI that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010 but no later than August 7, 2013.
- 5.5.2(b)** If the owner or operator of a CISWI or ACI makes changes that meet the definition of modification or reconstruction on or after August 7, 2013, the CISWI or ACI becomes subject to 40 CFR 60, Subpart CCCC [Section 13.2.81] and this rule no longer applies to that unit.

- 5.5.2(c)** If the owner or operator of a CISWI or ACI makes physical or operational changes to an existing CISWI primarily to comply this Rule, 40 CFR 60, Subpart CCCC [incorporated by reference at Section 13.2.81] does not apply to that unit. Such changes do not qualify as modifications or reconstructions under Subpart CCCC.
- 5.5.2(d)** The following types of units are exempt from this rule, but some units are required to provide notification:
- 5.5.2(d)(1)** Pathological waste incineration units. Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in Section 5.5.1 are not subject to this rule if the two requirements specified in subdivisions 5.5.2(d)(1)(i) and 5.5.2(d)(1)(ii) below are met.
- 5.5.2(d)(1)(i)** Notify the Health Officer that the unit meets these criteria.
- 5.5.2(d)(1)(ii)** Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.
- 5.5.2(d)(2)** Reserved.
- 5.5.2(d)(3)** Municipal waste combustion units. Incineration units that are subject to 40 CFR 60, Subpart Ea (Standards of Performance for Municipal Waste Combustors); 40 CFR 60, Subpart Eb (Standards of Performance for Large Municipal Waste Combustors); 40 CFR 60, Subpart Cb (Emission Guidelines and Compliance Time for Large Municipal Combustors); 40 CFR 60, Subpart AAAA (Standards of Performance for Small Municipal Waste Combustion Units); or 40 CFR 60, Subpart BBBB (Emission Guidelines for Small Municipal Waste Combustion Units).
- 5.5.2(d)(4)** Medical waste incineration units. Incineration units regulated under 40 CFR 60, Subpart Ec incorporated by reference in Paragraph 13.2.3(c) (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or Part 5.4 [Incineration of Hospital/Medical/Infectious Waste].
- 5.5.2(d)(5)** Small power production facilities. Units that meet the three requirements specified in subdivisions 5.5.2(d)(5)(i) through 5.5.2(d)(5)(iii) below.
- 5.5.2(d)(5)(i)** The unit qualifies as a small power-production facility under Section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).
- 5.5.2(d)(5)(ii)** The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.
- 5.5.2(d)(5)(iii)** The owner or operator submit a request to the Health Officer for a determination that the qualifying small power production facility is combusting homogenous waste.
- 5.5.2(d)(5)(iv)** The owner or operator maintains records specified in Paragraph 5.5.11(v).
- 5.5.2(d)(6)** Cogeneration facilities. Units that meet the three requirements specified in subdivisions 5.5.2(d)(6)(i) through (iv) below.
- 5.5.2(d)(6)(i)** The unit qualifies as a cogeneration facility under Section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).
- 5.5.2(d)(6)(ii)** The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.
- 5.5.2(d)(6)(iii)** The owner or operator submits a request to the Health Officer for a determination that the qualifying cogeneration facility is combusting homogenous waste.
- 5.5.2(d)(6)(iv)** The owner or operator maintain records specified in Paragraph 5.5.11(w).
- 5.5.2(d)(7)** Hazardous waste combustion units. Units that are required to obtain a permit under Section 3005 of the Solid Waste Disposal Act.
- 5.5.2(d)(8)** Materials recovery units. Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.
- 5.5.2(d)(9)** Reserved.
- 5.5.2(d)(10)** Reserved.

- 5.5.2(d)(11)** Reserved.
 - 5.5.2(d)(12)** Reserved.
 - 5.5.2(d)(13)** Sewage treatment plants. Incineration units regulated under 40 CFR 60, Subpart O as incorporated in Section 13.2.15 (Standards of Performance for Sewage Treatment Plants).
 - 5.5.2(d)(14)** Reserved.
 - 5.5.2(d)(15)** Reserved.
 - 5.5.2(d)(16)** Sewage sludge incineration units. Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to 40 CFR 60, Subpart LLLL as incorporated in Section 13.3.90 (Standards of Performance for Sewage Sludge Incineration Units) or 40 CFR 60, Subpart MMMM (Emission Guidelines and Compliance Times for Sewage Sludge Incineration Units).
 - 5.5.2(d)(17)** Other solid waste incineration units. Incineration units that are subject to 40 CFR 60, Subpart EEEE (Standards of Performance for Other Solid Waste Incineration Units) or 40 CFR 60, Subpart FFFF (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units).
- 5.5.3** Increments of Progress.
- 5.5.3(a)** For owners or operators planning to achieve compliance more than one year following the effective date of EPA's approval of these rules, the two increments of progress specified in subparagraphs 5.5.3(a)(1) and (2) below shall be met.
 - 5.5.3(a)(1)** Submit a final control plan to the Health Officer no later than one year after the effective date of EPA's approval of these rules.
 - 5.5.3(a)(2)** Achieve final compliance no later than December 1, 2005 for CISWIs that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWIs that commenced construction on or before June 4, 2010.
 - 5.5.3(b)** The owner or operator shall submit to the Health Officer, notifications for achieving increments of progress. The notifications shall be postmarked no later than 10 business days after the compliance date for the increment. These notifications shall include the three items specified in subparagraphs 5.5.3(b)(1) through 5.5.3(b)(3) below:
 - 5.5.3(b)(1)** Notification that the increment of progress has been achieved.
 - 5.5.3(b)(2)** Any items required to be submitted with each increment of progress.
 - 5.5.3(b)(3)** Signature of the owner or operator of the CISWI.
 - 5.5.3(c)** If an owner or operator fails to meet an increment of progress, a notification to the Health Officer shall be submitted and postmarked within 10 business days after the date for that increment of progress in paragraph 5.5.3(a) above. The owner or operator shall inform the Health Officer that the increment was not met, and reports shall be submitted each subsequent calendar month until the increment of progress is met.
 - 5.5.3(d)** For the control plan increment of progress, the owner or operator shall satisfy the two requirements specified in subparagraphs 5.5.3 (d)(1) and 5.5.3 (d)(2) below.
 - 5.5.3(d)(1)** Submit the final control plan that includes the five items described in subdivisions 5.5.3(d)(1)(i) through 5.5.3(d)(1)(v) below.
 - 5.5.3(d)(1)(i)** A description of the devices for air pollution control and process changes that will be used to comply with the emission limitations and other requirements of this rule:
 - 5.5.3(d)(1)(ii)** The type(s) of waste to be burned;
 - 5.5.3(d)(1)(iii)** The maximum design waste burning capacity;
 - 5.5.3(d)(1)(iv)** The anticipated maximum charge rate;
 - 5.5.3(d)(1)(v)** If applicable, the petition for site-specific operating limits under paragraph 5.5.6(c); and
 - 5.5.3(d)(2)** Maintain an onsite copy of the final control plan.

- 5.5.3(e)** For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected CISWI is brought online, all necessary process changes and air pollution control devices would operate as designed.
- 5.5.3(f)** Closing and restarting a CISWI.
- 5.5.3(f)(1)** If the CISWI is closed but will be restarted prior to the final compliance date of December 1, 2005 for CISWIs that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWIs that commenced construction on or before June 4, 2010, the owner or operator shall meet the increments of progress specified in 5.5.3(a).
- 5.5.3(f)(2)** If the CISWI is closed but will be restarted after the final compliance date of December 1, 2005 for CISWIs that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWIs that commenced construction on or before June 4, 2010, the owner or operator shall complete emission control retrofits and meet the emission limitations and operating limits on the date the unit restarts operation.
- 5.5.3(g)** Permanent closure of a CISWI. If the owner or operator plans to close the CISWI rather than comply with this rule, submit a closure notification, including the date of closure, to the Health Officer within 90 days after EPA approval of these rules.
- 5.5.4** Waste Management Plan.
- 5.5.4(a)** A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.
- 5.5.4(b)** A waste management plan shall be submitted no later than the date specified in subparagraph 5.5.3(a)(1) for submittal of the final control plan.
- 5.5.4(c)** A waste management plan shall include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan shall identify any additional waste management measures, and the source shall implement those measures considered practical and feasible, based on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.
- 5.5.5** Operator Training and Qualification.
- 5.5.5(a)** No CISWI can be operated unless a fully trained and qualified CISWI operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI operator may operate the CISWI directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI operators are temporarily not accessible, the procedures in paragraph 5.5.5(h) shall be followed.
- 5.5.5(b)** Operator training and qualification shall be obtained through a State-approved program that meets the requirements included in paragraph 5.5.5(c). Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under subparagraph 5.5.5(c)(2) below.
- 5.5.5(c)** Training shall be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in subparagraphs 5.5.5(c)(1) through 5.5.5(c)(3) below.
- 5.5.5(c)(1)** Training on the eleven subjects listed in subdivisions 5.5.5(c)(1)(i) through 5.5.5(c)(1)(xi) below.
- 5.5.5(c)(1)(i)** Environmental concerns, including types of emissions.
- 5.5.5(c)(1)(ii)** Basic combustion principles, including products of combustion.
- 5.5.5(c)(1)(iii)** Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.
- 5.5.5(c)(1)(iv)** Combustion controls and monitoring.
- 5.5.5(c)(1)(v)** Operation of air pollution control equipment and factors affecting performance (if applicable).
- 5.5.5(c)(1)(vi)** Inspection and maintenance of the incinerator and air pollution control devices.
- 5.5.5(c)(1)(vii)** Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunction.

- 5.5.5(c)(1)(viii)** Bottom and fly ash characteristics and handling procedures.
- 5.5.5(c)(1)(ix)** Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.
- 5.5.5(c)(1)(x)** Pollution prevention.
- 5.5.5(c)(1)(xi)** Waste management practices.
- 5.5.5(c)(2)** An examination designed and administered by the instructor.
- 5.5.5(c)(3)** Written material covering the training course topics that can serve as reference material following completion of the course.
- 5.5.5(d)** The operator training course shall be completed by the latest of the three dates specified in subparagraphs 5.5.5(d)(1) through 5.5.5(d)(3) below.
 - 5.5.5(d)(1)** The final compliance date of December 1, 2005 for CISWI that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWI that commenced construction on or before June 4, 2010.
 - 5.5.5(d)(2)** Six months after CISWI startup.
 - 5.5.5(d)(3)** Six months after an employee assumes responsibility for operating the CISWI or assumes responsibility for supervising the operation of the CISWI.
- 5.5.5(e)** To maintain qualification, the operator shall complete an annual review or refresher course covering, at a minimum, the five topics described in subparagraphs 5.5.5(e)(1) through 5.5.5(e)(5) below.
 - 5.5.5(e)(1)** Update of regulations.
 - 5.5.5(e)(2)** Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.
 - 5.5.5(e)(3)** Inspection and maintenance.
 - 5.5.5(e)(4)** Prevention and correction of malfunctions or conditions that may lead to malfunction.
 - 5.5.5(e)(5)** Discussion of operating problems encountered by attendees.
- 5.5.5(f)** A lapsed operator qualification shall be renewed by one of the two methods specified in subparagraphs 5.5.5(f)(1) and 5.5.5(f)(2) below.
 - 5.5.5(f)(1)** For a lapse of less than 3 years, the operator shall complete a standard annual refresher course described in paragraph 5.5.5(e) above.
 - 5.5.5(f)(2)** For a lapse of 3 years or more, the operator shall repeat the initial qualification requirements in paragraphs 5.5.5(b) and 5.5.5(c) above.
- 5.5.5(g)** Requirements for site specific documentation.
 - 5.5.5(g)(1)** Site specific documentation shall be available at the facility and readily accessible for all CISWI operators that addresses the ten topics described in subdivisions 5.5.5(g)(1)(i) through 5.5.5(g)(1)(x) below. The owner or operator shall maintain this information and the training records required by subparagraph 5.5.5(g)(3) below in a manner that they can be readily accessed and are suitable for inspection upon request.
 - 5.5.5(g)(1)(i)** Summary of the applicable standards under this rule.
 - 5.5.5(g)(1)(ii)** Procedures for receiving, handling, and charging waste.
 - 5.5.5(g)(1)(iii)** Incinerator startup, shutdown, and malfunction procedures.
 - 5.5.5(g)(1)(iv)** Procedures for maintaining proper combustion air supply levels.
 - 5.5.5(g)(1)(v)** Procedures for operating the incinerator and associated air pollution control systems within the standards established under this rule.
 - 5.5.5(g)(1)(vi)** Monitoring procedures for demonstrating compliance with the incinerator operating limits.
 - 5.5.5(g)(1)(vii)** Reporting and recordkeeping procedures.

- 5.5.5(g)(1)(viii)** The waste management plan required under Section 5.5.4.
- 5.5.5(g)(1)(ix)** Procedures for handling ash.
- 5.5.5(g)(1)(x)** A list of the wastes burned during the performance test.
- 5.5.5(g)(2)** The owner or operator shall establish a program for reviewing the information listed in paragraph 5.5.5(g)(1) above with each incinerator operator.
- 5.5.5(g)(2)(i)** The initial review of the information listed in subparagraph 5.5.5(g)(1) shall be conducted by the latest of the three dates specified in clauses 5.5.5(g)(2)(i)(A) through (C) below.
- 5.5.5(g)(2)(i)(A)** The final compliance date of December 1, 2005 for CISWIs that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWIs that commenced construction on or before June 4, 2010.
- 5.5.5(g)(2)(i)(B)** Six months after CISWI startup.
- 5.5.5(g)(2)(i)(C)** Six months after being assigned to operate the CISWI.
- 5.5.5(g)(2)(ii)** Subsequent annual reviews of the information listed in subparagraph 5.5.5(g)(1) shall be conducted no later than 12 months following the previous review.
- 5.5.5(g)(3)** The owner or operator shall also maintain the information specified in subdivisions 5.5.5(g)(3)(i) through 5.5.5(g)(3)(iii) below.
- 5.5.5(g)(3)(i)** Records showing the names of CISWI operators who have completed review of the information in subparagraph 5.5.5(g)(1) above as required by subparagraph 5.5.5(g)(2), including the date of the initial review and all subsequent annual reviews.
- 5.5.5(g)(3)(ii)** Records showing the names of the CISWI operators who have completed the operator training requirements under 5.5.5(a) through (c), met the criteria for qualification under 5.5.5(b), and maintained or renewed their qualification under paragraphs 5.5.5(e) or (f), respectively. Records shall include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.
- 5.5.5(g)(3)(iii)** For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.
- 5.5.5(h)** If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within 1 hour), the owner or operator shall meet one of the two criteria specified in subparagraphs 5.5.5(h)(1) and 5.5.5(h)(2) below, depending on the length of time that a qualified operator is not accessible.
- 5.5.5(h)(1)** When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI may be operated by other plant personnel familiar with the operation of the CISWI who have completed a review of the information specified in subparagraph 5.5.5(g)(1) within the past 12 months. However, the period when all qualified operators were not accessible shall be recorded and this deviation included in the annual report as specified under paragraph 5.5.11(cc).
- 5.5.5(h)(2)** When all qualified operators are not accessible for 2 weeks or more, the two actions that are described in subdivisions 5.5.5(h)(2)(i) and 5.5.5(h)(2)(ii) below shall be taken.
- 5.5.5(h)(2)(i)** Notify the Health Officer of this deviation in writing within 10 days. In the notice, state what caused this deviation, what actions are being taken to ensure that a qualified operator is accessible, and when it is expected that a qualified operator will be accessible.
- 5.5.5(h)(2)(ii)** Submit a status report to the Administrator every 4 weeks outlining what actions are being taken to ensure that a qualified operator is accessible, stating when it is expected that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI. The first status report shall be submitted 4 weeks after notification to the Health Officer of the deviation under subdivision 5.5.5(h)(2)(i). If the Administrator notifies the owner or operator that the request to continue operation of the CISWI is disapproved, the CISWI may continue operation for 90 days, then shall cease operation. Operation of the unit may resume if the two requirements in clauses 5.5.5(h)(2)(ii)(A) and 5.5.5(h)(2)(ii)(B) below are met:

- 5.5.5(h)(2)(ii)(A)** A qualified operator is accessible as required under paragraph 5.5.5(a); and
- 5.5.5(h)(2)(ii)(B)** The owner or operator notifies the Administrator that a qualified operator is accessible and operation is resuming.
- 5.5.6** Emission Limitations and Operating Limits.
- 5.5.6(a)** The owner or operator shall meet the emission limitations for each CISWI, including bypass stack or vent, specified in Table 1 of this rule or Tables 5 through 8 of this rule by the final compliance date of December 1, 2005 for CISWIs that commenced construction on or before November 30, 1999, or February 7, 2018 for CISWIs that commenced construction on or before June 4, 2010, as applicable. The emission limitations apply at all times the unit is operating including and not limited to startup, shutdown, or malfunction.
- 5.5.6(a)(1)** Units that do not use wet scrubbers shall maintain opacity less than or equal to the percent opacity (three 1-hour blocks consisting of ten 6-minute average opacity values) specified in Table 1 of this rule, as applicable.
- 5.5.6(b)** Timelines for Operating Limits.
- 5.5.6(b)(1)** If a wet scrubber(s) is used to comply with the emission limitations, the owner or operator shall establish operating limits for up to four operating parameters (as specified in Table 2 of this rule) as described in subdivisions 5.5.6(b)(1)(i) through 5.5.6(b)(1)(iv) during the initial performance test.
- 5.5.6(b)(1)(i)** Maximum charge rate, calculated using one of the two different procedures in clauses 5.5.6(b)(1)(i)(A) or 5.5.6(b)(1)(i)(B), as appropriate.
- 5.5.6(b)(1)(i)(A)** For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and
- 5.5.6(b)(1)(i)(B)** For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.
- 5.5.6(b)(1)(ii)** Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.
- 5.5.6(b)(1)(iii)** Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.
- 5.5.6(b)(1)(iv)** Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.
- 5.5.6(b)(2)** The owner or operator shall meet the operating limits established on the date that the performance test report is submitted to the EPA's Central Data Exchange or postmarked, per the requirements of 5.5.11(hh).
- 5.5.6(b)(3)** If the owner or operator uses a fabric filter to comply with the emission limitations and does not use a particulate matter (PM) continuous parameter monitoring system (CPMS) for monitoring PM compliance, each fabric filter system shall be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.
- 5.5.6(b)(4)** If the owner or operator uses an electrostatic precipitator to comply with the emission limitations and does not use a PM CPMS for monitoring PM compliance, the owner or operator shall measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average

secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

- 5.5.6(b)(5)** If the owner or operator uses an activated carbon sorbent injection to comply with the emission limitations, the owner or operator shall measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load fraction, as defined in this rule, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).
- 5.5.6(b)(6)** If the owner or operator uses selective noncatalytic reduction to comply with the emission limitations, the owner or operator shall measure the charge rate, the secondary chamber temperature (if applicable to the CISWI), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lowest secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.
- 5.5.6(b)(7)** If the owner or operator uses a dry scrubber to comply with the emission limitations, the owner or operator shall measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when the unit operates at lower loads, multiply the sorbent injection rate by the load fraction, as defined in this rule, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).
- 5.5.6(b)(8)** If the owner or operator does not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitation, and if the owner or operator does not determine compliance with the particulate matter emission limitation with either a particulate matter CEMS or a particulate matter CPMS, the owner or operator shall maintain opacity to less than or equal to ten percent opacity (1-hour block average).
- 5.5.6(b)(9)** If the owner or operator uses a PM CPMS to demonstrate compliance, the owner or operator shall establish a PM CPMS operating limit and determine compliance with it according to subdivisions 5.5.6(b)(9)(i) through (v) below.
- 5.5.6(b)(9)(i)** During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record all hourly average output values (milliamps or digital signal equivalent) from the PM CPMS for the periods corresponding to the test runs (e.g., three 1-hour average PM CPMS output values for three 1-hour test runs).
- 5.5.6(b)(9)(i)(A)** The owner or operator's PM CPMS shall provide a 4-20 milliamp output, or the digital signal equivalent, and the establishment of its relationship to manual reference method measurements shall be determined in units of milliamps or digital bits;
- 5.5.6(b)(9)(i)(B)** The owner or operator's PM CPMS operating range shall be capable of reading PM concentrations from zero to a level equivalent to at least two times the allowable emission limit. If the owner or operator's PM CPMS is an auto ranging instrument capable of multiple scales, the primary range of the instrument shall be capable of reading PM concentrations from zero to a level equivalent to two times the allowable emission limit; and.
- 5.5.6(b)(9)(i)(C)** During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all the PM CPMS output values for three corresponding 2-hour Method 51 test runs).
- 5.5.6(b)(9)(ii)** If the average of the three PM performance test runs are below 75% of the PM emission limit, the owner or operator shall calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or Method 29 performance test with the procedures in subdivisions 5.5.6(b)(9)(i) through (v).
- 5.5.6(b)(9)(ii)(A)** Determine the instrument zero output with one of the following procedures:

- 5.5.6(b)(9)(ii)(A)(I)** Zero point data for in-situ instruments shall be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.
- 5.5.6(b)(9)(ii)(A)(II)** Zero point data for extractive instruments shall be obtained by removing the extractive probe from the stack and drawing in clean ambient air.
- 5.5.6(b)(9)(ii)(A)(III)** The zero point can also be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when the process is not operating, but the fans are operating or the source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.
- 5.5.6(b)(9)(ii)(A)(IV)** If none of the steps in subclauses 5.5.6(b)(9)(ii)(A)(I) through 5.5.6(b)(9)(ii)(A)(III) are possible, the owner or operator shall use a zero output value provided by the manufacturer.
- 5.5.6(b)(9)(ii)(B)** Determine the PM CPMS instrument average in milliamps, or the digital equivalent, and the average of the corresponding three PM compliance test runs, using Equation 1 of this rule:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \quad \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i \quad (Eq. 1)$$

Where:

X_i = the PM CPMS data points for the three runs constituting the performance test;

Y_i = the PM concentration value for the three runs constituting the performance test; and

n = the number of data points.

- 5.5.6(b)(9)(ii)(C)** With the instrument zero expressed in milliamps, or the digital equivalent, the three run average PM CPMS milliamp value, or its digital equivalent, and the three run average PM concentration from the three compliance tests, determine a relationship of mg/dscm per milliamp, or digital equivalent, with Equation 2 of this rule:

$$R = \frac{\bar{y}}{(\bar{x} - z)} \quad (Eq. 2)$$

Where:

R = the relative mg/dscm per milliamp for the PM CPMS;

\bar{y} = the three run average mg/dscm PM concentration;

\bar{x} = the three run average milliamp output, or the digital equivalent, from the PM CPMS; and

z = the milliamp or digital signal equivalent of the instrument zero determined from 5.5.6(b)(9)(ii)(A).

- 5.5.6(b)(9)(ii)(D)** Determine the source specific 30-day rolling average operating limit using the mg/dscm per milliamp value, or per digital signal equivalent, from Equation 2 in Equation 3, below. This sets the operating limit at the PM CPMS output value corresponding to 75% of the emission limit.

$$O_i = z + \frac{0.75(L)}{R} \quad (Eq. 3)$$

Where:

O_i = the operating limit for the PM CPMS on a 30-day rolling average, in milliamps or the digital equivalent;

L = the source emission limit expressed in mg/dscm;

z = the instrument zero in milliamps or digital equivalent, determined from clause 5.5.6(b)(9)(ii)(A);
and

R = the relative mg/dscm per milliamp, or per digital signal output equivalent, for the PM CPMS, from Equation 2 of this rule.

- 5.5.6(b)(9)(iii)** If the average of the three PM compliance test runs is at or above 75% of the PM emission limit the owner or operator shall determine the operating limit by averaging the PM CPMS milliamp or digital signal output corresponding to the three PM performance test runs that demonstrate compliance with the emission limit using Equation 4 and shall submit all compliance test and PM CPMS data according to the reporting requirements in subdivision 5.5.6(b)(9)(v).

$$O_h = \frac{1}{n} \sum_{i=1}^n X_i \quad (Eq. 4)$$

Where:

X_i = the PM CPMS data points for all runs i ;

n = the number of data points; and

O_h = the site specific operating limit, in milliamps or digital signal equivalent.

- 5.5.6(b)(9)(iv)** To determine continuous compliance, the owner or operator shall record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The owner or operator shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

- 5.5.6(b)(9)(v)** For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run.

- 5.5.6(c)** If the owner or operator uses an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator, or a dry scrubber or limits emissions in some other manner, including mass balances, to comply with the emission limitations under paragraph 5.5.6(a), the owner or operator shall petition the Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall submit the petition at least sixty days before the performance test is scheduled to begin. The petition shall include the five items listed in subparagraphs 5.5.6(c)(1) through (5) below.

- 5.5.6(c)(1)** Identification of the specific parameters the owner or operator proposes to use as additional operating limits.

- 5.5.6(c)(2)** A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

- 5.5.6(c)(3)** A discussion of how the owner or operator will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters.

- 5.5.6(c)(4)** A discussion identifying the methods the owner or operator will use to measure and the instruments that will be used to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

- 5.5.6(c)(5)** A discussion identifying the frequency and methods for recalibrating the instruments that will be used for monitoring these parameters.

5.5.7 Performance Testing.

- 5.5.7(a)** All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations.

- 5.5.7(b)** The owner or operator shall document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in paragraph 5.5.11(b)(1) and the types of waste burned during the performance test.

- 5.5.7(c)** All performance tests shall be conducted using the minimum run duration specified in Table 1 and Tables 5 through 8 of this rule.
- 5.5.7(d)** Method 1 of 40 CFR 60, Appendix A shall be used to select the sampling location and number of traverse points.
- 5.5.7(e)** Method 3A or 3B of 40 CFR 60, Appendix A shall be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of 40 CFR 60, Appendix A shall be used simultaneously with each method (except when using Method 9 and Method 22).

- 5.5.7(f)** All pollutant concentrations, except for opacity, shall be adjusted to 7 percent oxygen using Equation 5 of this Part:

$$C_{adj} = C_{meas} \frac{(20.9 - 7)}{(20.9 - \%O_2)} \quad (Eq. 5)$$

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis;

$(20.9 - 7)$ = 20.9 percent oxygen – 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

- 5.5.7(g)** The owner or operator shall determine dioxins/furans toxic equivalency by following the procedures in subparagraphs 5.5.7(g)(1) through (4) below.
 - 5.5.7(g)(1)** Measure the concentration of each dioxin/furan tetra- through octa- isomer emitted using EPA Method 23 at 40 CFR 60, Appendix A.
 - 5.5.7(g)(2)** Quantify isomers meeting identification criteria in Section 11.4.3.4 of Method 23, regardless of whether the isomers meet identification Section 11.4.3.4.1. The owner or operator shall quantify the isomers per Section 11.4.3.5 of Method 23. (Note: the owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers to meet the identification criteria in Section 11.4.3.4 of Method 23.)
 - 5.5.7(g)(3)** For each dioxin/furan (tetra- through octa-chlorinated) isomer measured in accordance with subparagraphs 5.5.7(g)(1) and 5.5.7(g)(2) above, multiply the isomer concentration by its corresponding toxic equivalency factor specified in Table 3 of this rule.
 - 5.5.7(g)(4)** Sum the products calculated in accordance with subparagraph 5.5.7(g)(3) above to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.
- 5.5.7(h)** Method 22 at 40 CFR 60, Appendix A-7 shall be used to determine compliance with the fugitive ash emission limit in Table 1 of this rule or Tables 5 through 8 of this rule.
- 5.5.7(i)** If the owner or operator has an applicable opacity operating limit, the owner or operator shall determine compliance with the opacity limit using Method 9 at 40 CFR 60, Appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless the owner or operator is required to install a continuous opacity monitoring system, consistent with sections 5.5.9 and 5.5.10.
- 5.5.7(j)** The owner or operator shall determine dioxins/furans total mass basis by following the procedures in subparagraphs 5.5.7(j)(1) through 5.5.7(j)(3) below.
 - 5.5.7(j)(1)** Measure the concentration of each dioxin/furan tetra- through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR 60, Appendix A-7.
 - 5.5.7(j)(2)** Quantify isomers meeting identification criteria in Section 11.4.3.4 of Method 23, regardless of whether the isomers meet identification criteria in Section 11.4.3.4.1 of Method 23. The owner or operator shall quantify the isomers per Section 11.4.3.5 of Method 23. (Note: The owner or operator may reanalyze the sample aliquot or split to reduce the number of isomers to meet the identification criteria in Section 11.4.3.4 of Method 23); and
 - 5.5.7(j)(3)** Sum the quantities measured in accordance with subparagraphs 5.5.7(j)(1) and 5.5.7(j)(2) to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

5.5.7(k) The results of performance tests are used to demonstrate compliance with the emission limitations in Table 1 or Tables 5 through 8 of this rule.

5.5.8 Initial Compliance Requirements.

5.5.8(a) The owner or operator shall conduct a performance test, as required under paragraphs 5.5.6 and 5.5.7, to determine compliance with the emission limitations in Table 1 and Tables 5 through 8, to establish compliance with any opacity operating limits in paragraph 5.5.6(b), to establish the kiln-specific emission limit in 5.5.9(y), as applicable, and to establish operating limits using the procedures in paragraphs 5.5.6(b) or 5.5.6(c). The performance test shall be conducted using the test methods listed in Table 1 and Tables 5 through 8 and the procedures in Section 5.5.7. The use of the bypass stack during a performance test shall invalidate the performance test. As an alternative to conducting a performance test, as required under 5.5.6 and 5.5.7, the owner or operator shall use a 30-day rolling average of the 1-hour arithmetic average CEMS data, including CEMS data during startup and shutdown as defined in this rule, to determine compliance with the emission limitations in Table 1 or Tables 5 through 8 of this rule. The owner or operator shall conduct a performance evaluation of each continuous monitoring system within 180 days of installation of the monitoring system. The initial performance evaluation shall be conducted prior to collecting CEMS data that will be used for the initial compliance demonstration.

5.5.8(b) The initial performance test shall be conducted no later than 180 days after the final compliance date. The final compliance date is specified in subparagraph 5.5.3(a)(2).

5.5.8(c) If the owner or operator commences or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and conducted a test consistent with the provisions of this rule while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, retesting is not needed until 6 months from the date the solid waste is reintroduced.

5.5.8(d) If the owner or operator commences combusting or recommences combusting a solid waste at an existing combustion unit at any commercial or industrial facility and has not conducted a performance test consistent with the provisions of this rule while combusting the given solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, the owner or operator shall conduct a performance test within 60 days commencing or recommencing solid waste combustion.

5.5.8(e) The initial air pollution control device inspection shall be conducted within 60 days after installation of the control device and the associated CISWI reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

5.5.8(f) Within 10 operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Health Officer establishing a date whereby all necessary repairs of the designated facility shall be completed.

5.5.8(g) If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, initial compliance shall be demonstrated pursuant to 40 CFR § 63.1348(a)(5). The initial compliance test must begin on the first operating day following completion of the field testing and data collection that demonstrates that the continuous emissions monitoring system has satisfied the relevant performance acceptance criteria of Performance Specifications 12A or 12B of 40 CFR 60, Appendix B. The notification required by 5.5.11(aa) shall also include the owner or operator's intention to comply with the equivalent production-based mercury emission limit in Table 7. For waste-burning kilns choosing to comply with the equivalent production-based mercury emission limit in Table 7, the term operating day in 40 CFR §63.1348(a)(5), 40 CFR §63.1348(b)(7) and 40 CFR §63.1349(b)(5) means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker.

5.5.9 Continuous Compliance Requirements.

5.5.9(a) Compliance with standards.

5.5.9(a)(1) The emission standards and operating requirements set forth in this rule apply at all times.

5.5.9(a)(2) If the combusting of solid waste is ceased the owner or operator may opt to remain subject to the provisions of this rule. Consistent with the definition of CISWI, the owner or operator is subject to the requirements of this rule at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (i.e., the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time).

- 5.5.9(a)(3)** If the combusting of solid waste is ceased the owner or operator shall be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by the owner or operator, that shall be at least 6 months from the date that combusting solid waste is ceased, consistent with subparagraph 5.5.9(a)(2). The source shall remain in compliance with this rule until the effective date of the waste-to-fuel switch.
- 5.5.9(a)(4)** Any owner or operator of an existing commercial or industrial combustion unit that combusted a fuel or no-waste material, and commences or recommences combustion of solid waste, the owner or operator is subject to the provisions of this rule as of the first day solid waste is introduced or reintroduced to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. The owner or operator shall complete all initial compliance demonstrations for any CAA §112 standards that are applicable to the facility before commencing or recommencing combustion of solid waste. The owner or operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification shall identify:
- 5.5.9(a)(4)(i)** The name of the owner or operator of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;
- 5.5.9(a)(4)(ii)** The currently applicable subcategory under this rule, and any subpart and subcategory of 40 CFR 63 that will be applicable after the combusting of solid waste is ceased;
- 5.5.9(a)(4)(iii)** The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;
- 5.5.9(a)(4)(iv)** The date on which the unit became subject to the currently applicable emission limits;
- 5.5.9(a)(4)(v)** The date upon which combusting solid waste is ceased, and the date (if different) that any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with subparagraphs 5.5.9(a)(2) and 5.5.9(a)(3).
- 5.5.9(a)(5)** All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.
- 5.5.9(a)(6)** All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks shall be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests shall be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with CAA §112 monitoring requirements or monitoring requirements under this rule.
- 5.5.9(b)** The owner or operator shall conduct an annual performance test for the pollutants listed in Table 1 or Tables 5 through 8 of this rule and opacity for each CISWI as required under Section 5.5.7. The annual performance test shall be conducted using the test methods listed in Table 1 or Tables 5 through 8 of this rule and the procedures in Section 5.5.7. Opacity shall be measured using EPA Reference Method 9 at 40 CFR 60, Appendix A. Annual performance tests are not required if the owner or operator uses CEMS or continuous opacity monitoring systems to determine compliance.
- 5.5.9(c)** The owner or operator shall continuously monitor the operating parameters specified in paragraph 5.5.6(b) or established under paragraph 5.5.6(c) and as specified in paragraph 5.5.10(u). Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour block average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under paragraph 5.5.6(c). or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph 5.5.9(a) constitutes a deviation from the operating limits established under this rule, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

- 5.5.9(d)** The owner or operator shall burn only the same types of waste and fuels used to establish subcategory applicability (for ERUs) and operating limits during the performance test.
- 5.5.9(e)** For energy recovery units, incinerators, and small remote units, the owner or operator shall perform annual visual emissions test for ash handling.
- 5.5.9(f)** For energy recovery units, the owner or operator shall conduct an annual performance test for opacity using EPA Reference Method 9 at 40 CFR 60, Appendix A (except where particulate matter continuous monitoring system or continuous parameter monitoring systems are used) and the pollutants listed in Table 6 of this rule.
- 5.5.9(g)** For facilities using a CEMS to demonstrate compliance with the carbon monoxide emission limit, compliance with the carbon monoxide emission limit may be demonstrated by using the CEMS as described in 5.5.10(o).
- 5.5.9(h)** Coal and liquid/gas energy recovery units with annual average heat input rates greater than 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in paragraph 5.5.10(n), instead of the continuous parameter monitoring system (CPMS) specified in paragraph 5.5.9(i). Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in paragraph 5.5.10(n), instead of particulate matter testing with EPA Method 5 at 40 CFR 60, Appendix A-3 and, if applicable, the continuous opacity monitoring requirements in paragraph 5.5.9(i).
- 5.5.9(i)** For energy recovery units with annual average heat input rates greater than or equal to 10 MMBTU/hour but less than 250 MMBtu/hr that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, particulate matter CEMS, or particulate matter CPMS, the owner or operator shall install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in 5.5.10(m).
- 5.5.9(j)** For waste-burning kilns, the owner or operator shall conduct an annual performance test for the pollutants (except mercury and particulate matter, and hydrogen chloride if no acid gas wet scrubber is used) listed in Table 7 of this rule, unless the owner or operator demonstrate initial and continuous compliance using CEMS as allowed in 5.5.9(u). If the waste-burning kiln is not equipped with an acid gas wet scrubber or dry scrubber, the owner or operator shall determine compliance with the hydrogen chloride emission limit using a HCl CEMS according to the requirements of 5.5.9(j)(1). The owner or operator shall determine compliance with the mercury emissions limit using a mercury CEMS or an integrated sorbent trap monitoring system according to 5.5.9(j)(2). The owner or operator shall determine compliance with particulate matter using CPMS according to 5.5.9(x).
- 5.5.9(j)(1)** If compliance with the HCl emissions limit is monitored by operating an HCl CEMS, the owner or operator shall do so in accordance with Performance Specification 15 (PS 15) of 40 CFR 60, Appendix B or PS 18 of 40 CFR 60, Appendix B. The owner or operator shall operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of 40 CFR 60, Appendix F except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. The owner or operator shall operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of 40 CFR 60, Appendix F. For any performance specification used, the owner or operator shall use Method 321 of 40 CFR 63, Appendix A as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in 5.5.9(j)(1)(i) and 5.5.9(j)(1)(ii) apply to all HCl CEMS used under this rule:
- 5.5.9(j)(1)(i)** The owner or operator shall use a measurement span value for any HCl CEMS of 0-10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during "mill off" conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records; and
- 5.5.9(j)(1)(ii)** In order to quality assure data measured above the span value, the owner or operator shall use one of the three options in 5.5.9(j)(1)(ii)(A) through 5.5.9(j)(1)(ii)(C):
- 5.5.9(j)(1)(ii)(A)** Include a second span that encompasses the HCl emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required;

5.5.9(j)(1)(ii)(B) Quality assure any data above the span value by proving instrument linearity beyond the span value established in 5.5.9(j)(1)(i) using the following procedure. Conduct a weekly “above span linearity” calibration challenge of the monitoring system using a reference gas with a certified value greater than the highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The “above span” reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as would be done for a daily calibration. The “above span linearity” challenge is successful if the value measured by the HCl CEMS falls within 10% of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10% of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new “above span linearity” challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in 5.5.9(j)(1)(ii)(D). In this manner values measured by the HCl CEMS during the above span linearity challenge exceeding ±20% of the certified value of the reference gas must be normalized using equation 6;

5.5.9(j)(1)(ii)(C) Quality assure any data above the span value established in 5.5.9(j)(1)(i) using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value the owner or operator shall, within 24 hours before or after, introduce a higher, “above span” HCl reference gas standard to the HCl CEMS. The “above span” reference gas shall meet the requirements of the applicable performance specification and target a concentration level between 50% and 150% of the highest expected hourly concentration measured during the period of measurements above span, and shall be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as would be done for a daily calibration. The “above span” calibration is successful if the value measured by the HCl CEMS is within 20% of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20% of the certified value of the reference gas, then the owner or operator shall normalize the stack gas values measured above span as described in 5.5.9(j)(1)(ii)(D). If the “above span” calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then the owner or operator shall determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an “above span” calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour; and

5.5.9(j)(1)(ii)(D) In the event that the “above span” calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20% of the certified value of the reference gas), then the owner or operator shall normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

$$(Eq. 6) \quad \frac{\text{Certified reference gas value}}{\text{Measured value of reference gas}} \times \text{Measured stack gas} = \text{Normalized stack gas result}$$

Only one “above span” calibration is needed per 24-hour period.

5.5.9(j)(2) Compliance with the mercury emissions limit must be determined using a mercury CEMS or integrated sorbent trap monitoring system according to the following requirements:

5.5.9(j)(2)(i) The owner or operator shall operate a mercury CEMS in accordance with Performance Specification 12A at 40 CFR 60, Appendix B or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B at 40 CFR 60, Appendix B; these monitoring systems shall be quality assured according to Procedure 5 of 40 CFR 60, Appendix F. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period must be assigned to each hour during the sampling period. If complying with the production-rate based mercury limit for a waste-burning kiln, the owner or operator shall also monitor hourly clinker production and determine the hourly mercury emissions rate in pounds per million ton of clinker produced. The owner or operator shall demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations or mass emissions rates, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19–19 in section 12.4.1 of EPA Reference Method 19 at 40

CFR 60, Appendix A. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content;

- 5.5.9(j)(2)(ii)** Owners or operators using a mercury CEMS or integrated sorbent trap monitoring system to determine mass emission rate shall install, operate, calibrate and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of Performance Specification 6 at 40 CFR 60, Appendix B and conducting an annual relative accuracy test of the continuous emission rate monitoring system according to section 8.2 of Performance Specification 6; and
- 5.5.9(j)(2)(iii)** The owner or operator of a waste-burning kiln shall demonstrate initial compliance by operating a mercury CEMS or integrated sorbent trap monitoring system while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.
- 5.5.9(k)** If the owner or operator uses an air pollution control device to meet the emission limitations in this rule, an initial and annual inspection of the air pollution control device shall be conducted. The inspection shall include, at a minimum, the following:
 - 5.5.9(k)(1)** Inspect air pollution control device(s) for proper operation.
 - 5.5.9(k)(2)** Develop a site-specific monitoring plan according to the requirements in paragraph 5.5.9(l). This requirement also applies if the owner or operator petition the Administrator for alternative monitoring parameters under 40 CFR §60.13(i).
- 5.5.9(l)** For each CMS required in this paragraph, the owner or operator shall develop and submit to the Administrator for approval a site-specific monitoring plan according to the requirements of paragraph 5.5.9(l) that addresses subdivisions 5.5.9(l)(1)(i) through 5.5.9(l)(1)(vi).
 - 5.5.9(l)(1)** The owner or operator shall submit this site-specific monitoring plan at least 60 days before the initial performance evaluation of the continuous monitoring system.
 - 5.5.9(l)(1)(i)** Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).
 - 5.5.9(l)(1)(ii)** Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.
 - 5.5.9(l)(1)(iii)** Performance evaluation procedures and acceptance criteria (e.g., calibrations).
 - 5.5.9(l)(1)(iv)** Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR §60.11(d).
 - 5.5.9(l)(1)(v)** Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR §60.13.
 - 5.5.9(l)(1)(vi)** Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR §§60.7(b), 60.7(c) introductory text, 60.7(c)(1), 60.7(c)(4), 60.7(d), 60.7(e), 60.7(f) and 60.7(g).
 - 5.5.9(l)(2)** The owner or operator shall conduct a performance evaluation of each continuous monitoring system in accordance with the site-specific monitoring plan.
 - 5.5.9(l)(3)** The owner or operator shall operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.
- 5.5.9(m)** If the owner or operator has an operating limit that requires the use of a flow monitoring system, the owner or operator shall meet the requirements in paragraph 5.5.9(l) and subparagraphs 5.5.9(m)(1) through 5.5.9(m)(4).
 - 5.5.9(m)(1)** Install the flow sensor and other necessary equipment in a position that provides a representative flow.
 - 5.5.9(m)(2)** Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent.
 - 5.5.9(m)(3)** Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
 - 5.5.9(m)(4)** Conduct a flow monitoring system performance evaluation in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.

- 5.5.9(n)** If the owner or operator has an operating limit that requires the use of a pressure monitoring system, the owner or operator shall meet the requirements in paragraph 5.5.9(l) and subparagraphs 5.5.9(n)(1) through 5.5.9(n)(6).
- 5.5.9(n)(1)** Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).
- 5.5.9(n)(2)** Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
- 5.5.9(n)(3)** Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.
- 5.5.9(n)(4)** Perform checks at the frequency outlined in the site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).
- 5.5.9(n)(5)** Conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.
- 5.5.9(n)(6)** If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with the monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in the monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.
- 5.5.9(o)** If the owner or operator has an operating limit that requires a pH monitoring system, the owner or operator shall meet the requirements in paragraph 5.5.9(l) and subparagraphs 5.5.9(o)(1) through 5.5.9(o)(4).
- 5.5.9(o)(1)** Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.
- 5.5.9(o)(2)** Ensure the sample is properly mixed and representative of the fluid to be measured.
- 5.5.9(o)(3)** Conduct a performance evaluation of the pH monitoring system in accordance with the monitoring plan at least once each process operating day.
- 5.5.9(o)(4)** Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than quarterly.
- 5.5.9(p)** If the owner or operator has an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, the owner or operator shall meet the requirements in paragraph 5.5.9(l) and subparagraphs 5.5.9(p)(1) through 5.5.9(p)(2).
- 5.5.9(p)(1)** Install sensors to measure (secondary) voltage and current to the precipitator collection plates.
- 5.5.9(p)(2)** Conduct a performance evaluation of the electric power monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.
- 5.5.9(q)** If the owner or operator has an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), the owner or operator shall meet the requirements in paragraph 5.5.9(l) and subparagraphs 5.5.9(q)(1) through 5.5.9(q)(2).
- 5.5.9(q)(1)** Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.
- 5.5.9(q)(2)** Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with the monitoring plan at the time of each performance test but no less frequent than annually.
- 5.5.9(r)** If the owner or operator elect to use a fabric filter bag leak detection system to comply with the requirements of this rule, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraph 5.5.9(l) and subparagraphs 5.5.9(r)(1) through 5.5.9(r)(5).
- 5.5.9(r)(1)** Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.
- 5.5.9(r)(2)** Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

- 5.5.9(r)(3)** Conduct a performance evaluation of the bag leak detection system in accordance with the monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see 40 CFR §60.17).
- 5.5.9(r)(4)** Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor.
- 5.5.9(r)(5)** Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm shall be located where it is observed readily by plant operating personnel.
- 5.5.9(s)** For facilities using a CEMS to demonstrate initial and continuous compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in 5.5.10(l) to measure sulfur dioxide. The sulfur dioxide CEMS shall follow the procedures and methods specified in 5.5.9(s). For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater.
- 5.5.9(s)(1)** During each relative accuracy test run of the CEMS required by Performance Specification 2 in 40 CFR 60, Appendix B, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subdivisions 5.5.9(s)(1)(i) and 5.5.9(s)(1)(ii).
- 5.5.9(s)(1)(i)** For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17) shall be used.
- 5.5.9(s)(1)(ii)** For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, shall be used.
- 5.5.9(s)(2)** The span value of the CEMS at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule. The span value of the CEMS at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this rule.
- 5.5.9(s)(3)** Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in 40 CFR 60, Appendix F.
- 5.5.9(t)** For facilities using a CEMS to demonstrate initial and continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in 5.5.10(k) to measure nitrogen oxides. The nitrogen oxides CEMS shall follow the procedures and methods specified in subparagraphs 5.5.9(t)(1) through 5.5.9(t)(4).
- 5.5.9(t)(1)** During each relative accuracy test run of the CEMS required by Performance Specification 2 of 40 CFR 60, Appendix B, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in subdivisions 5.5.9(t)(1)(i) and 5.5.9(t)(1)(ii).
- 5.5.9(t)(1)(i)** For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR 60, Appendix A shall be used.
- 5.5.9(t)(1)(ii)** For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see 40 CFR §60.17), as applicable, shall be used.
- 5.5.9(t)(2)** The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of unit.
- 5.5.9(t)(3)** Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with Procedure 1 in 40 CFR 60, Appendix F.
- 5.5.9(t)(4)** The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluents corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in subdivisions 5.5.9(t)(4)(i) through 5.5.9(t)(4)(iv) below. This relationship may be reestablished during performance compliance tests.
- 5.5.9(t)(4)(i)** The fuel factor equation in Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A, 3B, or as an alternative ANSI/ASME PTC 19.10-1981

(incorporated by reference, see 40 CFR §60.17), as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

- 5.5.9(t)(4)(ii)** Samples shall be taken for at least 30 minutes in each hour.
- 5.5.9(t)(4)(iii)** Each sample shall represent a 1-hour average.
- 5.5.9(t)(4)(iv)** A minimum of 3 runs shall be performed.
- 5.5.9(u)** For facilities using a continuous emissions monitoring system or an integrated sorbent trap monitoring system for mercury to demonstrate initial and continuous compliance with any of the emission limits of this rule, the owner or operator shall complete the following:
 - 5.5.9(u)(1)** Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS or an integrated sorbent trap monitoring system data during startup and shutdown, as defined in this rule, calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR 60, Appendix A-7. The 1-hour arithmetic averages for CEMS shall be calculated using the data points required under § 60.13(e)(2). Except for CEMS or an integrated sorbent trap monitoring system data during startup and shutdown, the 1-hour arithmetic averages used to calculate the 30-day rolling average emission concentrations shall be corrected to 7% oxygen (dry basis). Integrated sorbent trap monitoring system or CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content.
 - 5.5.9(u)(2)** Operate all CEMS and integrated sorbent trap monitoring systems in accordance with the applicable procedures under 40 CFR 60, Appendix B and 40 CFR 60, Appendix F of.
 - 5.5.9(v)** Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO_x, SO₂, and dioxin/furans.
 - 5.5.9(w)** For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate, and maintain an oxygen analyzer system as defined in 5.5.1 according to the procedures in subparagraphs 5.5.9(w)(1) through 5.5.9(w)(4) below.
 - 5.5.9(w)(1)** The oxygen analyzer system shall be installed by the initial performance test date specified in paragraph 5.5.6(b).
 - 5.5.9(w)(2)** The owner or operator shall operate the oxygen trim system within compliance with subparagraph 5.5.9(w)(3) below at all times.
 - 5.5.9(w)(3)** The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.
 - 5.5.9(w)(4)** The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of 40 CFR 60, Appendix A.
 - 5.5.9(x)** For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in subparagraphs 5.5.9(x)(1) through 5.5.9(x)(8) below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).
 - 5.5.9(x)(1)** Install, calibrate, operate, and maintain the PM CPMS according to the procedures in the approved site-specific monitoring plan developed in accordance with paragraph 5.5.9(l) and subdivisions 5.5.9(x)(1)(i) through 5.5.9(x)(1)(iii).
 - 5.5.9(x)(1)(i)** The operating principle of the PM CPMS shall be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS shall be expressed as milliamps or the digital signal equivalent.
 - 5.5.9(x)(1)(ii)** The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.
 - 5.5.9(x)(1)(iii)** The PM CPMS shall be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.

- 5.5.9(x)(2)** During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, the owner or operator shall adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in paragraph 5.5.6(b).
- 5.5.9(x)(3)** Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.
- 5.5.9(x)(4)** Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or their digital equivalent).
- 5.5.9(x)(5)** The owner or operator shall collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subdivision 5.5.9(x)(1)(ii), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan.
- 5.5.9(x)(6)** The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with the operating limit except:
- 5.5.9(x)(6)(i)** Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in the annual deviation report);
- 5.5.9(x)(6)(ii)** Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in the annual deviation report);
- 5.5.9(x)(6)(iii)** Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this rule.
- 5.5.9(x)(7)** The owner or operator shall record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan.
- 5.5.9(x)(8)** For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:
- 5.5.9(x)(8)(i)** Within 48 hours of the deviation, visually inspect the air pollution control device;
- 5.5.9(x)(8)(ii)** If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;
- 5.5.9(x)(8)(iii)** Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45 days of the deviation, the owner or operator shall re-establish the CPMS operating limit. Conducting of additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under 5.5.9(x) is not required; and.
- 5.5.9(x)(8)(iv)** PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this rule.
- 5.5.9(y)** When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, the owner or operator shall:

- 5.5.9(y)(1)** Calculate a kiln-specific emission limit using equation 7:

$$(Eq. 7) \quad C_{ks} = \frac{((Emission\ Limit) \times (Q_{ab} + Q_{cm} + Q_{ks})) - (Q_{ab} \times C_{ab}) - (Q_{cm} \times C_{cm})}{Q_{ks}}$$

Where:

C_{ks} = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant, each corrected to 7% O₂)

Q_{ab} = Alkali bypass flow rate (volume/hr)

C_{ab} = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant, each corrected to 7% O₂)

Q_{cm} = In-line coal mill flow rate (volume/hr)

C_{cm} = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant, each corrected to 7% O₂)

Q_{ks} = Kiln stack flow rate (volume/hr)

- 5.5.9(y)(2)** Particulate matter concentration shall be measured downstream of the in-line coal mill. All other pollutant concentrations shall be measured either upstream or downstream of the in-line coal mill.
- 5.5.9(y)(3)** For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test shall be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test).
- 5.5.9(z)** The owner or operator shall conduct annual performance tests between 11 and 13 months of the previous performance test.
- 5.5.9(aa)** On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), the owner or operator shall complete the air pollution control device inspection as described in paragraphs 5.5.8(e) and 5.5.8(f).
- 5.5.9(bb)** The owner or operator shall conduct annual performance tests according to the schedule specified in paragraph 5.5.9(z), with the following exceptions:
- 5.5.9(bb)(1)** The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits, as specified in paragraphs 5.5.9(cc) and 5.5.9(dd). New operating limits become effective on the date that the performance test report is submitted to the EPA's Central Data Exchange or postmarked, per the requirements of 5.5.11(hh). The Health Officer may request a repeat performance test at any time.
- 5.5.9(bb)(2)** The owner or operator shall repeat the performance test within 60 days of a process change, as defined in section 5.5.1.
- 5.5.9(bb)(3)** Performance tests may be conducted less often if the owner or operator meet the following conditions: the performance tests for the pollutant for at least 2 consecutive performance tests demonstrates that the emission level for the pollutant is no greater than the emission level specified in 5.5.9(bb)(3)(i) or 5.5.9(bb)(3)(ii), as applicable; there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions; and the owner or operator is not required to conduct a performance test for the pollutant in response to a request by the Director 5.5.9(bb)(1) or a process change in 5.5.9(bb)(2). In this case, the owner or operator do not have to conduct a performance test for that pollutant for the next 2 years. The owner or operator shall conduct a performance test for the pollutant no more than 37 months following the previous performance test for the pollutant. If the emission level for the CISWI continues to meet the emission level specified in 5.5.9(bb)(3)(i) and 5.5.9(bb)(3)(ii), as applicable, the owner or operator may choose to conduct performance tests for the pollutant every third year as long as there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. Each such performance test shall be conducted no more than 37 months after the previous performance test.
- 5.5.9(bb)(3)(i)** For particulate matter, hydrogen chloride, mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, cadmium, lead, and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in Table 1 or Tables 5 through 8 of this rule, as applicable.; and
- 5.5.9(bb)(3)(ii)** For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observation periods.
- 5.5.9(bb)(4)** If the owner or operator is conducting less frequent testing for a pollutant as provided in subparagraph 5.5.9(bb)(3) and a subsequent performance test for the pollutant indicates that the CISWI does not meet the emission level specified in subdivision 5.5.9(bb)(3)(i) or 5.5.9(bb)(3)(ii), as applicable, the owner or operator shall conduct annual performance tests for the pollutant according to the schedule specified in paragraph 5.5.9(bb) until qualification for less frequent testing for the pollutant as specified in subparagraph 5.5.9(bb)(3).

- 5.5.9(cc)** The owner or operator may conduct a repeat performance test at any time to establish new values for the operating limits. The Health Officer may request a repeat performance test at any time.
- 5.5.9(dd)** The owner or operator shall repeat the performance test if the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.
- 5.5.9(ee)** If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, continuous compliance shall be demonstrated pursuant to the procedures of 40 CFR §63.1348(b)(7) and 40 CFR §63.1349(b)(5).
- 5.5.10** Monitoring.
- 5.5.10(a)** If a wet scrubber is used to comply with the emission limitation under paragraph 5.5.6(a), the owner or operator shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 2 of this rule. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 2 of this rule at all times except as specified in subdivision 5.5.10(u)(1)(i).
- 5.5.10(b)** If a fabric filter is used to comply with the requirements of this rule and a PM CPMS or PM CEMS is not used for monitoring PM compliance, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system as specified in subparagraphs 5.5.10(b)(1) through 5.5.10(b)(8).
- 5.5.10(b)(1)** The owner or operator shall install and operate a bag leak detection system for each exhaust stack of the fabric filter.
- 5.5.10(b)(2)** Each bag leak detection system shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.
- 5.5.10(b)(3)** The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.
- 5.5.10(b)(4)** The bag leak detection system sensor shall provide output of relative or absolute particulate matter loadings.
- 5.5.10(b)(5)** The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.
- 5.5.10(b)(6)** The bag leak detection system shall be equipped with an alarm system that will automatically alert an operator when an increase in relative particulate matter emissions over a preset level is detected. The alarm shall be located where it is observed easily by plant operating personnel.
- 5.5.10(b)(7)** For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.
- 5.5.10(b)(8)** Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- 5.5.10(c)** If a device other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber is used to comply with the emission limitations under paragraph 5.5.6(a), the owner or operator shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in paragraph 5.5.6(c).
- 5.5.10(d)** If activated carbon injection is used to comply with the emission limitations in this rule, the owner or operator shall measure the minimum sorbent flow rate once per hour.
- 5.5.10(e)** If selective noncatalytic reduction is used to comply with the emission limitations, the owner or operator shall complete the following:
- 5.5.10(e)(1)** Following the date on which the initial performance test is completed or is required to be completed under section 5.5.7, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI) or the minimum reagent flow rate measured as 3-hour block averages at all times.

- 5.5.10(e)(2)** Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.
- 5.5.10(f)** If an electrostatic precipitator is used to comply with the emission limits of this rule and a PM CPMS is not used for monitoring PM compliance, the owner or operator shall monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.
- 5.5.10(g)** For waste-burning kilns not equipped with a wet scrubber or dry scrubber, an owner or operator shall install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions, discharged to the atmosphere, as specified in 5.5.9(j) and record the output of the system. The owner or operator may substitute use of a HCl CEMS for conducting the HCl initial and annual testing with EPA Method 321 at 40 CFR 63, Appendix A. For units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride initial and annual performance test. For units equipped with a hydrogen chloride CEMS, the owner or operator is not required to monitor the minimum hydrogen chloride sorbent flow rate, the minimum scrubber liquor pH, and the minimum injection rate.
- 5.5.10(h)** To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the particulate matter annual performance test. For units equipped with a particulate matter CEMS, other CMS monitoring for PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure) is not required. A facility may also substitute use of a particulate matter CEMS for conducting the PM initial performance test.
- 5.5.10(i)** To demonstrate initial and continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan initial and annual performance test. The owner or operator shall record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR 60, Appendix A-7. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the Federal Register. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR 60, Appendix A-7 shall install, calibrate, maintain and operate a continuous automated sampling system and shall comply with the requirements specified in 40 CFR §§60.58b(p) and 60.58b(q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.
- 5.5.10(j)** To demonstrate initial and continuous compliance with the mercury emissions limit, a facility may substitute use of a mercury CEMS or an integrated sorbent trap monitoring system for the mercury initial and annual performance test. The owner or operator who elects to continuously measure mercury emissions instead of sampling and testing using EPA Method 29 or 30B at 40 CFR 60, Appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see 40 CFR §60.17), or an approved alternative method for measuring mercury emissions, shall install, calibrate, maintain and operate the mercury CEMS or integrated sorbent trap monitoring system and shall comply with performance specification 12A or performance specification 12B, respectively, and quality assurance procedure 5. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period shall be assigned to each hour during the sampling period. For units equipped with a mercury CEMS or an integrated sorbent trap monitoring system, the owner or operator is not required to monitor the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. The owner or operators of waste-burning kilns shall install, calibrate, maintain and operate a mercury CEMS or an integrated sorbent trap monitoring system as specified in 5.5.9(j).
- 5.5.10(k)** To demonstrate initial and continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides initial and annual performance test to demonstrate compliance with the nitrogen oxides emissions limits. For units equipped with a nitrogen oxides CEMS, monitoring of the charge rate, secondary chamber temperature and reagent flow for selective non catalytic reduction is not required.
- 5.5.10(k)(1)** Install, calibrate, maintain and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of 40 CFR 60, Appendix B, the quality assurance procedure 1 of 40 CFR 60, Appendix F and the procedures under 40 CFR §60.13 shall be followed for installation, evaluation and operation of the CEMS.
- 5.5.10(k)(2)** Compliance with the emission limit for nitrogen oxides shall be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data, as outlined in 5.5.9(u).

- 5.5.10(l)** To demonstrate initial and continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a CEMS for the sulfur dioxide initial and annual performance test to demonstrate compliance with the sulfur dioxide emissions limits.
- 5.5.10(l)(1)** Install, calibrate, maintain and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of 40 CFR 60, Appendix B, the quality assurance requirements of procedure 1 of 40 CFR 60, Appendix F and the procedures under 40 CFR §60.13 must be followed for installation, evaluation and operation of the CEMS.
- 5.5.10(l)(2)** Compliance with the sulfur dioxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data, as outlined in 5.5.9(u)
- 5.5.10(m)** For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, an electrostatic precipitator, particulate matter CEMS, or particulate matter CPMS, the owner or operator shall install, operate, certify and maintain a continuous opacity monitoring system according to the procedures in subparagraphs 5.5.10(m)(1) through 5.5.10(m)(5) by the compliance date specified in section 5.5.6(a). Energy recovery units that use a particulate matter CEMS to demonstrate initial and continuing compliance according to the procedures in paragraph 5.5.10(n) are not required to install a continuous opacity monitoring system and shall perform the annual performance tests for opacity consistent with paragraph 5.5.9(f).
- 5.5.10(m)(1)** Install, operate and maintain each continuous opacity monitoring system according to performance specification 1 at 40 CFR 60, Appendix B.
- 5.5.10(m)(2)** Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in 40 CFR §60.13 and according to performance specification 1 at 40 CFR 60, Appendix B.
- 5.5.10(m)(3)** As specified in 40 CFR §60.13(e)(1), each continuous opacity monitoring system shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
- 5.5.10(m)(4)** Reduce the continuous opacity monitoring system data as specified in 40 CFR §60.13(h)(1).
- 5.5.10(m)(5)** Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.
- 5.5.10(n)** For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR 60, Appendix A or monitoring with a particulate matter CPMS according to paragraph 5.5.10(r), shall install, calibrate, maintain and operate a PM CEMS and shall comply with the requirements specified in subparagraphs 5.5.10(n)(1) through 5.5.10(n)(12) below.
- 5.5.10(n)(1)** Notify the Health Officer 1 month before starting use of the system.
- 5.5.10(n)(2)** Notify the Health Officer 1 month before stopping use of the system.
- 5.5.10(n)(3)** PM CEMS shall be installed, evaluated and operated in accordance with the requirements of performance specification 11 of 40 CFR 60, Appendix B and quality assurance requirements of procedure 2 of 40 CFR 60, Appendix F and 40 CFR §60.13.
- 5.5.10(n)(4)** The initial performance evaluation shall be completed no later than 180 days after the final compliance date for meeting the amended emission limitations, as specified under section 5.5.7 or within 180 days of notification to the Health Officer of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 at 40 CFR 60, Appendix A performance tests, whichever is later.
- 5.5.10(n)(5)** The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established according to the procedures and methods specified in subdivisions 5.5.9(t)(5)(i) through 5.5.9(t)(5)(iv).
- 5.5.10(n)(6)** The owner or operator of an affected facility shall conduct an initial performance test for particulate matter emissions. If PM CEMS are elected for demonstrating compliance, and the initial performance test has not yet been conducted, then initial compliance shall be determined by using the CEMS specified in paragraph 5.5.10(n)

to measure particulate matter. The owner or operator shall calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this rule, using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR 60, Appendix A-7.

- 5.5.10(n)(7)** Continuous compliance with the particulate matter emission limit shall be determined based on the 30-day rolling average calculated using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR 60, Appendix A-7 from the 1-hour arithmetic average of the CEMS outlet data.
- 5.5.10(n)(8)** At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in paragraph 5.5.10(u).
- 5.5.10(n)(9)** The 1-hour arithmetic averages required under subparagraph 5.5.10(n)(7) shall be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (or carbon dioxide) (dry basis) and shall be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this rule, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages shall be calculated using the data points required under 40 CFR §60.13(e)(2).
- 5.5.10(n)(10)** All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of subparagraph 5.5.10(n)(8) are not met.
- 5.5.10(n)(11)** The CEMS shall be operated according to performance specification 11 in 40 CFR 60, Appendix B.
- 5.5.10(n)(12)** Quarterly and yearly accuracy audits and daily drift, system optics, and sample volume checks shall be performed in accordance with procedure 2 in 40 CFR 60, Appendix F.
- 5.5.10(o)** To demonstrate initial and continuous compliance with the carbon monoxide emissions limit, a facility may substitute use of a CEMS for the carbon monoxide initial and annual performance test to demonstrate compliance with the carbon monoxide emissions limits.
- 5.5.10(o)(1)** Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4A or 4B of 40 CFR 60, Appendix B, the quality assurance procedure 1 of 40 CFR 60, Appendix F and the procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS.
- 5.5.10(o)(2)** Compliance with the carbon monoxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this rule, using CEMS outlet data, as outlined in 5.5.9(u).
- 5.5.10(p)** The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain and operate a device or method for measuring the use of the bypass stack including date, time and duration.
- 5.5.10(q)** For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, the owner or operator shall install, operate and maintain an oxygen analyzer system as defined in section 5.1.1 according to the procedures in subparagraphs 5.5.10(q)(1) through 5.5.10(q)(4) below.
- 5.5.10(q)(1)** The oxygen analyzer system shall be operated by the initial performance test date specified in paragraph 5.5.6(b).
- 5.5.10(q)(2)** The owner or operator shall operate the oxygen trim system within compliance with subparagraph 5.5.10(q)(3) below at all times.
- 5.5.10(q)(3)** The owner or operator shall maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to subparagraph 5.5.10(q)(4) below is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test.
- 5.5.10(q)(4)** The owner or operator shall calculate and record a 30-day rolling average oxygen concentration using Equation 19-19 in section 12.4.1 of EPA Reference Method 19 of 40 CFR 60, Appendix A.
- 5.5.10(r)** For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, the owner or operator shall install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in subparagraphs 5.5.10(r)(1) through 5.5.10(r)(8) below. For other energy recovery units, the owner or operator may elect to use PM CPMS operated in accordance with this paragraph. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

- 5.5.10(r)(1)** Install, calibrate, operate, and maintain the PM CPMS according to the procedures in the approved site-specific monitoring plan developed in accordance with paragraph 5.5.9(l) and subdivisions 5.5.10(r)(1)(i) through 5.5.10(r)(1)(iii).
- 5.5.10(r)(1)(i)** The operating principle of the PM CPMS shall be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS shall be expressed as milliamps or the digital signal equivalent.
- 5.5.10(r)(1)(ii)** The PM CPMS shall have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.
- 5.5.10(r)(1)(iii)** The PM CPMS shall be capable of detecting and responding to particulate matter concentrations of no greater than 0.5 mg/actual cubic meter.
- 5.5.10(r)(2)** During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, the owner or operator shall adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in paragraph 5.5.6(b).
- 5.5.10(r)(3)** Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.
- 5.5.10(r)(4)** Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or digital bits).
- 5.5.10(r)(5)** The owner or operator shall collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in subdivision 5.5.10(r)(1)(ii), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in the site-specific monitoring plan.
- 5.5.10(r)(6)** The owner or operator shall use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with the operating limit except:
- 5.5.10(r)(6)(i)** Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in the annual deviation report);
- 5.5.10(r)(6)(ii)** Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in the annual deviation report); and
- 5.5.10(r)(6)(iii)** Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this rule.
- 5.5.10(r)(7)** The owner or operator shall record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with the site-specific monitoring plan.
- 5.5.10(r)(8)** For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, the owner or operator shall:
- 5.5.10(r)(8)(i)** Within 48 hours of the deviation, visually inspect the air pollution control device;
- 5.5.10(r)(8)(ii)** If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;
- 5.5.10(r)(8)(iii)** Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emissions control device(s). Within 45 days of the deviation, the owner or operator shall re-establish the CPMS operating limit. It is not required to conduct additional testing for any deviations that

occur between the time of the original deviation and the PM emissions compliance test required under this Part; and

- 5.5.10(r)(8)(iv)** PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this rule.
- 5.5.10(s)** If a dry scrubber is used to comply with the emission limits of this rule, the owner or operator shall monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test.
- 5.5.10(t)** If required to monitor clinker production to comply with the production-rate based mercury limit for the waste-burning kiln, the owner or operator shall:
- 5.5.10(t)(1)** Determine hourly clinker production by one of two methods:
- 5.5.10(t)(1)(i)** Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production shall be maintained within ± 5 percent accuracy, or
- 5.5.10(t)(1)(ii)** Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed shall be maintained within ± 5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the owner or operator shall use the new ratio going forward, but do not have to retroactively change clinker production rates previously estimated.
- 5.5.10(t)(2)** Determine the accuracy of the system of measuring hourly clinker production (or feed mass flow, if applicable) before the final compliance date of this rule and during each quarter of source operation.
- 5.5.10(t)(3)** Conduct accuracy checks in accordance with the procedures outlined in the site-specific monitoring plan under 5.5.9(l).
- 5.5.10(u)** The minimum amount of monitoring data obtained is determined as follows:
- 5.5.10(u)(1)** For each continuous monitoring system required or optionally allowed under section 5.5.10, the owner or operator shall monitor and collect data according to subdivisions 5.5.10(u)(1)(i) through 5.5.10(u)(1)(iii) below:
- 5.5.10(u)(1)(i)** The owner or operator shall operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in subparagraph 5.5.11(cc)(15)), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator is required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.
- 5.5.10(u)(1)(ii)** The owner or operator may not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.
- 5.5.10(u)(1)(iii)** Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.
- 5.5.10(v)** If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, it must also monitor mercury pursuant to 40 CFR §63.1350(k), the clinker production rate pursuant to 40 CFR §63.1350(d), and the flow rate pursuant to 40 CFR §63.1350(n). An owner or operator of a waste

burning kiln is not required to develop an emissions monitoring plan pursuant 40 CFR §63.1350(p)(1) through (p)(4) if the owner or operator prepares the emissions monitoring plan required pursuant to 5.5.9(k) and 5.5.9(l).

5.5.11 Recordkeeping and Reporting. The following items shall be maintained (as applicable) as specified in paragraphs 5.5.11(a), 5.5.11(b), and 5.5.11(e) through 5.5.11(w) for a period of at least 5 years:

- 5.5.11(a)** Calendar date of each record.
- 5.5.11(b)** Records of the data described in subparagraphs 5.5.11(b)(1) through 5.5.11(b)(7):
 - 5.5.11(b)(1)** The CISWI charge dates, times, weights, and hourly charge rates.
 - 5.5.11(b)(2)** Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.
 - 5.5.11(b)(3)** Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.
 - 5.5.11(b)(4)** Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.
 - 5.5.11(b)(5)** For affected CISWIs that establish operating limits for controls other than wet scrubbers under subparagraphs 5.5.6(b)(4) through 5.5.6(b)(7) or paragraph 5.5.6(c), the owner or operator shall maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, the owner or operator shall also maintain records of the load fraction and corresponding sorbent injection rate records.
 - 5.5.11(b)(6)** If a fabric filter is used to comply with the emission limitations, the owner or operator shall record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. The owner or operator shall also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in subparagraph 5.5.6(b)(3).
 - 5.5.11(b)(7)** If monitoring of clinker production is in accordance with 5.5.10(t):
 - 5.5.11(b)(7)(i)** Hourly clinker rate produced if clinker production is measured directly;
 - 5.5.11(b)(7)(ii)** Hourly measured kiln feed rates and calculated clinker production rates if clinker production is not measured directly;
 - 5.5.11(b)(7)(iii)** 30-day rolling averages for mercury in pounds per million tons of clinker produced;
 - 5.5.11(b)(7)(iv)** The initial and quarterly accuracy of the system of measuring hourly clinker production (or feed mass flow).
- 5.5.11(c)** Reserved.
- 5.5.11(d)** Reserved.
- 5.5.11(e)** Identification of calendar dates and times for which data show a deviation from the operating limits in Table 2 of this rule or a deviation from other operating limits established under subparagraphs 5.5.6(b)(4) through 5.5.6(b)(7) or paragraph 5.5.6(c) with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.
- 5.5.11(f)** The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.
- 5.5.11(g)** Records showing the names of CISWI operators who have completed review of the information in subparagraph 5.5.5(g)(1) as required by subparagraph 5.5.5(g)(2), including the date of the initial review and all subsequent annual reviews.
- 5.5.11(h)** Records showing the names of the CISWI operators who have completed the operator training requirements, met the criteria for qualification, and maintained or renewed their qualification under Section 5.5.5. Records shall include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.
- 5.5.11(i)** For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.
- 5.5.11(j)** Records of calibration of any monitoring devices as required under Section 5.5.10.

- 5.5.11(k)** Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.
- 5.5.11(l)** The information listed in paragraph 5.5.5(g).
- 5.5.11(m)** On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).
- 5.5.11(n)** Maintain records of the annual air pollution control device inspections that are required for each CISWI subject to the emissions limits in Table 1 or Tables 5 through 8 of this rule, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Health Officer.
- 5.5.11(o)** For continuously monitored pollutants or parameters, the owner or operator shall document and keep a record of the following parameters measured using continuous monitoring systems. If monitoring emissions with a CEMS, data that are CEMS data during startup and shutdown shall be indicated.
 - 5.5.11(o)(1)** All 6-minute average levels of opacity.
 - 5.5.11(o)(2)** All 1-hour average concentrations of sulfur dioxide emissions..
 - 5.5.11(o)(3)** All 1-hour average concentrations of nitrogen oxides emissions. T
 - 5.5.11(o)(4)** All 1-hour average concentrations of carbon monoxide emissions.
 - 5.5.11(o)(5)** All 1-hour average concentrations of particulate matter emissions.
 - 5.5.11(o)(6)** All 1-hour average concentrations of mercury emissions.
 - 5.5.11(o)(7)** All 1-hour average concentrations of hydrogen chloride emissions (HCl CEMS outputs).
 - 5.5.11(o)(8)** All 1-hour average percent oxygen concentrations.
 - 5.5.11(o)(9)** All 1-hour average PM CPMS readings or particulate matter CEMS outputs.
- 5.5.11(p)** Records indicating use of the bypass stack, including dates, times and durations.
- 5.5.11(q)** If choosing to stack test less frequently than annually, consistent with paragraph 5.5.9(bb), the owner or operator shall keep annual records that document that the emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.
- 5.5.11(r)** Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- 5.5.11(s)** Records of all required maintenance performed on the air pollution control and monitoring equipment.
- 5.5.11(t)** Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- 5.5.11(u)** For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR §241.3(b)(1), the owner or operator shall keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR §241.3(d)(1). If the owner or operator combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR §241.3(b)(4), the owner or operator shall keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR §241.2 and each of the legitimacy criteria in 40 CFR §241.3(d)(1). If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR §241.3(c), the owner or operator shall keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR §241.4, the owner or operator shall keep records documenting that the material is a listed non-waste under 40 CFR §241.4(a).
- 5.5.11(v)** Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous.

- 5.5.11(w)** Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.
- 5.5.11(x)** All records shall be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Health Officer.
- 5.5.11(y)** A summary of the reporting requirements can be found in Table 4 of this rule.
- 5.5.11(z)** The waste management plan shall be submitted no later than the date specified in subparagraph 5.5.3(a)(1) for submittal of the final control plan.
- 5.5.11(aa)** The information specified in subparagraphs 5.5.11(aa)(1) through 5.5.11(aa)(3) below shall be submitted no later than 60 days following the initial performance test. All reports shall be signed by the responsible official.
- 5.5.11(aa)(1)** The complete test report for the initial performance test results obtained under Section 5.5.8(a), as applicable.
- 5.5.11(aa)(2)** The values for the site-specific operating limits established in paragraphs 5.5.6(b) or 5.5.6(c).
- 5.5.11(aa)(3)** If a fabric filter is being used to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by paragraph 5.5.10(b).
- 5.5.11(bb)** An annual report shall be submitted no later than 12 months following the submission of the information in paragraph 5.5.11(aa) above. Subsequent reports shall be submitted no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, the owner or operator may be required by the permit to submit these reports more frequently.)
- 5.5.11(cc)** The annual report required under paragraph 5.5.11(bb) above shall include the items listed in subparagraphs 5.5.11(cc)(1) through 5.5.11(cc)(16) below. If there is a deviation from the operating limits or the emission limitations, deviation reports shall also be submitted as specified in paragraph 5.5.11(dd) below.
- 5.5.11(cc)(1)** Company name and address.
- 5.5.11(cc)(2)** Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- 5.5.11(cc)(3)** Date of report and beginning and ending dates of the reporting period.
- 5.5.11(cc)(4)** The values for the operating limits established pursuant to paragraphs 5.5.6(b) or 5.5.6(c).
- 5.5.11(cc)(5)** If no deviation from any emission limitation or operating limit that applies has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period.
- 5.5.11(cc)(6)** The highest recorded 3-hour average and the lowest recorded 3-hour average (30-day average for energy recovery units), as applicable, for each operating parameter recorded for the calendar year being reported.
- 5.5.11(cc)(7)** Information recorded under subparagraph 5.5.11(b)(6) and paragraphs 5.5.11(c) through 5.5.11(e) for the calendar year being reported.
- 5.5.11(cc)(8)** If a performance test was conducted during the reporting period, the results of that test.
- 5.5.11(cc)(9)** If the requirements of paragraph 5.5.9(bb) were met, and did not conduct a performance test during the reporting period, the owner or operator shall state that the requirements of paragraph 5.5.9(bb) were met, and, therefore, were not required to conduct a performance test during the reporting period.
- 5.5.11(cc)(10)** Documentation of periods when all qualified CISWI operators were unavailable for more than 8 hours, but less than 2 weeks.
- 5.5.11(cc)(11)** If there was a malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §60.11(d), including actions taken to correct a malfunction.
- 5.5.11(cc)(12)** For each deviation from an emission or operating limitation that occurs for a CISWI for which a CMS is not being used to comply with the emission or operating limitations in this rule, the annual report shall contain the following information.

- 5.5.11(cc)(12)(i)** The total operating time of the CISWI at which the deviation occurred during the reporting period.
- 5.5.11(cc)(12)(ii)** Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- 5.5.11(cc)(13)** If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in subparagraph 5.5.11(cc)(15), the annual report shall contain the following information for each deviation from an emission or operating limitation occurring for a CISWI for which a continuous monitoring system is being used to comply with the emission and operating limitations in this rule.
- 5.5.11(cc)(13)(i)** The date and time that each malfunction started and stopped.
- 5.5.11(cc)(13)(ii)** The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
- 5.5.11(cc)(13)(iii)** The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken.
- 5.5.11(cc)(13)(iv)** The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
- 5.5.11(cc)(13)(v)** A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
- 5.5.11(cc)(13)(vi)** A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
- 5.5.11(cc)(13)(vii)** A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI at which the continuous monitoring system downtime occurred during that reporting period.
- 5.5.11(cc)(13)(viii)** An identification of each parameter and pollutant that was monitored at the CISWI.
- 5.5.11(cc)(13)(ix)** A brief description of the CISWI.
- 5.5.11(cc)(13)(x)** A brief description of the continuous monitoring system.
- 5.5.11(cc)(13)(xi)** The date of the latest continuous monitoring system certification or audit; and
- 5.5.11(cc)(13)(xii)** A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.
- 5.5.11(cc)(14)** If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in subparagraph 5.5.11(cc)(15), a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.
- 5.5.11(cc)(15)** A continuous monitoring system is out of control if any of the following occur.
- 5.5.11(cc)(15)(i)** The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard.
- 5.5.11(cc)(15)(ii)** The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.
- 5.5.11(cc)(15)(iii)** The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.
- 5.5.11(cc)(16)** For energy recovery units, include the annual heat input and average annual heat input rate of all fuels being burned in the unit to verify which subcategory of energy recovery unit applies.
- 5.5.11(dd)** Reporting of deviations from the operating limits or the emission limitations.
- 5.5.11(dd)(1)** A deviation report shall be submitted if any recorded 3-hour average (30-day average for energy recovery units or for PM CPMS) parameter level is above the maximum operating limit or below the minimum operating limit established under this Rule, if the bag leak detection system alarm sounds for more than 5 percent of the

operating time for the 6-month reporting period, if a performance test was conducted that deviated from any emission limitation, or if a 30-day average measured using a CEMS deviated from any emission limitation.

- 5.5.11(dd)(2)** The deviation report shall be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31).
- 5.5.11(dd)(3)** In each required deviation report, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this Rule, include the items described in subdivisions 5.5.11(dd)(3)(i) through 5.5.11(dd)(3)(iv) below.
- 5.5.11(dd)(3)(i)** The calendar dates and times the CISWI deviated from the emission limitations or operating limit requirements.
- 5.5.11(dd)(3)(ii)** The averaged and recorded data for those dates.
- 5.5.11(dd)(3)(iii)** Duration and causes of the following:
- 5.5.11(dd)(3)(iii)(A)** Each deviation from emission limitations or operating limits and corrective actions taken, and
- 5.5.11(dd)(3)(iii)(B)** Bypass events and corrective actions taken.
- 5.5.11(dd)(3)(iv)** A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels.
- 5.5.11(dd)(4)** If all qualified operators are not accessible for 2 weeks or more, the two actions in subdivisions 5.5.11(dd)(4)(i) and 5.5.11(dd)(4)(ii) below shall be taken.
- 5.5.11(dd)(4)(i)** Submit a notification of the deviation within 10 days that includes the three items in clauses 5.5.11(dd)(4)(i)(A) through 5.5.11(dd)(4)(i)(C) below.
- 5.5.11(dd)(4)(i)(A)** A statement of what caused the deviation.
- 5.5.11(dd)(4)(i)(B)** A description of what actions are being taken to ensure that a qualified operator is accessible.
- 5.5.11(dd)(4)(i)(C)** The date when it is anticipated that a qualified operator will be available.
- 5.5.11(dd)(4)(ii)** Submit a status report to the Health Officer every 4 weeks that includes the three items in clauses 5.5.11(dd)(4)(ii)(A) through 5.5.11(dd)(4)(ii)(C) below.
- 5.5.11(dd)(4)(ii)(A)** A description of what actions are being taken to ensure that a qualified operator is accessible.
- 5.5.11(dd)(4)(ii)(B)** The date when it is anticipated that a qualified operator will be accessible.
- 5.5.11(dd)(4)(ii)(C)** Request approval from the Health Officer to continue operation of the CISWI.
- 5.5.11(dd)(4)(iii)** If the CISWI was shut down by the Administrator, under the provisions of subdivision 5.5.5(h)(2)(ii), due to a failure to provide an accessible qualified operator, the owner or operator shall notify the Administrator that operations will resume once a qualified operator is accessible.
- 5.5.11(ee)** Notifications provided by 40 CFR § 60.7 [as incorporated by reference in Section 13.2.1] shall be submitted.
- 5.5.11(ff)** If the owner or operator cease combusting solid waste but continue to operate, the owner or operator shall provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with paragraph 5.5.9(a). The notification must identify:
- 5.5.11(ff)(1)** The name of the owner or operator of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;
- 5.5.11(ff)(2)** The currently applicable subcategory under this rule, and any 40 CFR 63 subpart and subcategory that will be applicable after combusting solid waste is ceased;
- 5.5.11(ff)(3)** The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;
- 5.5.11(ff)(4)** The date on which the unit became subject to the currently applicable emission limits;

- 5.5.11(ff)(5)** The date upon which the unit will cease combusting solid waste, and the date (if different) that the owner or operator intend for any new requirements to become applicable (i.e., the effective date of the waste-to-fuel switch), consistent with subparagraphs 5.5.11(ff)(2) and 5.5.11(ff)(3).
- 5.5.11(gg)** Initial, annual, and deviation reports shall be submitted electronically or in paper format, postmarked on or before the submittal due dates. Beginning on April 16, 2021, or once the reporting form has been available in CEDRI for 1 year, whichever is later, subsequent reports shall be submitted on or before the submittal dates to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Use the appropriate electronic report in CEDRI for this rule or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>). The date when the forms become available in CEDRI will be posted on the CEDRI Web site. The reports shall be submitted by the deadlines specified in this rule, regardless of the method in which the report is submitted.
- 5.5.11(hh)** Submit results of performance tests and CEMS performance evaluation tests as follows.
- 5.5.11(hh)(1)** Within 60 days after the date of completing each performance test as required by this rule, the owner or operator shall submit the results of the performance tests following the procedure specified in either 5.5.11(hh)(1)(i) or 5.5.11(hh)(1)(ii):
- 5.5.11(hh)(1)(i)** For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, the owner or operator shall submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) Performance test data shall be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If the owner or operator claim that some of the performance test information being submitted is confidential business information (CBI), the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and
- 5.5.11(hh)(1)(ii)** For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR §60.4.
- 5.5.11(hh)(2)** Within 60 days after the date of completing each CEMS performance evaluation the owner or operator shall submit the results of the performance evaluation following the procedure specified in either 5.5.11(hh)(1) or 5.5.11(hh)(2):
- 5.5.11(hh)(2)(i)** For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator shall submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data shall be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If the owner or operator claim that some of the performance evaluation information being submitted is CBI, the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and
- 5.5.11(hh)(2)(ii)** For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator shall submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR §60.4.

- 5.5.11(ii)** If required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, the owner or operator shall be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the owner or operator may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. Notification shall be submitted to the Administrator in writing as soon as possible following the date known, or through due diligence should have known, that the event may cause or caused a delay in reporting. A written description shall be provided to the Administrator identifying the date, time and length for the outage; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or not to be taken to minimize the delay in reporting; and identify a date by which the owner or operator will propose to report, or if already met the reporting requirement at the time of the notification, the date reported. In any circumstance, the report shall be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- 5.5.11(jj)** If required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of this rule, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents compliance with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage). If intended to assert a claim of force majeure, a notification shall be submitted to the Administrator in writing as soon as possible following the date first known, or through due diligence should have known, that the event may cause or caused a delay in reporting. The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the owner or operator is proposed to report, or if already met the reporting requirement at the time of the notification, the date reported. In any circumstance, the reporting shall occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- 5.5.11(kk)** The Health Officer may change the semiannual or annual reporting dates. Procedures for seeking approval to change reporting dates are found in 40 CFR § 60.19(c) [as incorporated by reference in Section 13.2.1].
- 5.5.11(ll)** If the owner or operator of a waste-burning kiln chooses to comply with the equivalent production-based mercury emission limit in Table 7, it shall also keep records of all data collected from the continuous flow rate monitoring system required by 40 CFR §63 .1350(n), all data collected from the clinker production monitoring system required by 40 CFR §63.1350(d), and all calculated 30-operating day rolling average values derived from the mercury monitoring system. Units in the waste-burning kiln subcategory complying with the equivalent production-based mercury emission limit in Table 7 must also report all deviations from the equivalent production-based mercury emission limit in accordance with 5.5.11(a) through 5.5.11(dd).
- 5.5.12** Major Source Operating Permits. Each CISWI and air curtain incinerator subject to standards under Part 5.5 (excluding rules in paragraph 5.5.13 below) shall operate pursuant to the requirements of Chapter 18 by December 1, 2003.
- 5.5.13** Air Curtain Incinerators.
- 5.5.13(a)** An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)
- 5.5.13(b)** Air curtain incinerators that burn only the materials listed in subparagraphs 5.5.13(b)(1) through 5.5.13(b)(3) below are only required to meet the requirements under section 5.5.13.
- 5.5.13(b)(1)** 100 percent wood waste.
- 5.5.13(b)(2)** 100 percent clean lumber.
- 5.5.13(b)(3)** 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

- 5.5.13(c)** For owners or operators planning to achieve compliance more than one year following the effective date of EPA's approval of these Rules, the two increments of progress specified in subparagraphs 5.5.13(c)(1) and 5.5.13(c)(2) below shall be met.
- 5.5.13(c)(1)** Submit a final control plan no later than one year following the effective date of EPA's approval of these Rules.
- 5.5.13(c)(2)** Achieve final compliance no later than December 1, 2005.
- 5.5.13(d)** The owner or operator shall submit to the Health Officer, notifications for achieving increments of progress. The notifications shall be postmarked no later than 10 business days after the compliance date for the increment. These notifications shall include the three items specified in subparagraphs 5.5.13(d)(1) through 5.5.13(d)(3) below:
- 5.5.13(d)(1)** Notification that the increment of progress has been achieved.
- 5.5.13(d)(2)** Any items required to be submitted with each increment of progress.
- 5.5.13(d)(3)** Signature of the owner or operator of the incinerator unit.
- 5.5.13(e)** If an owner or operator fails to meet an increment of progress, a notification to the Health Officer shall be submitted and postmarked within 10 business days after the date for that increment of progress in paragraph 5.5.13(c) above. The owner or operator shall inform the Health Officer that the increment was not met, and reports shall be submitted each subsequent calendar month until the increment of progress is met.
- 5.5.13(f)** For the control plan increment of progress, the owner or operator shall satisfy the two requirements specified in subparagraphs 5.5.13(f)(1) and 5.5.13(f)(2) below.
- 5.5.13(f)(1)** Submit the final control plan, including a description of any devices for air pollution control and any process changes that will be used to comply with the emission limitations and other requirements of this paragraph.
- 5.5.13(f)(2)** Maintain an onsite copy of the final control plan.
- 5.5.13(g)** For the final compliance increment of progress, the owner or operator shall complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.
- 5.5.13(h)** Closing and restarting an air curtain incinerator.
- 5.5.13(h)(1)** If the incinerator is closed but will be restarted prior to the final compliance date of December 1, 2005, the increments of progress specified in paragraph 5.5.13(c) shall be met.
- 5.5.13(h)(2)** If the incinerator is to restart after the final compliance date, the owner or operator shall complete emission control retrofits and meet the emission limitations on the date the incinerator restarts operation.
- 5.5.13(i)** Permanent closure of an air curtain incinerator. If the owner or operator plans to close the incinerator rather than comply with this Rule, submit a closure notification, including the date of closure, to the Health Officer within 90 days after EPA approval of these Rules.
- 5.5.13(j)** Emission limitations for air curtain incinerators.
- 5.5.13(j)(1)** After the date the initial stack test is required or completed (whichever is earlier), the owner or operator shall meet the limitations in subdivisions 5.5.13(j)(1)(i) and 5.5.13(j)(1)(ii) below.
- 5.5.13(j)(1)(i)** Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in subdivision 5.5.13(j)(1)(ii) below.
- 5.5.13(j)(1)(ii)** Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.
- 5.5.13(k)** Monitoring opacity for air curtain incinerators.
- 5.5.13(k)(1)** Use Method 9 of 40 CFR 60, Appendix A to determine compliance with the opacity limitation.
- 5.5.13(k)(2)** Conduct an initial test for opacity as specified in 40 CFR § 60.8 no later than 180 days after the final compliance date.

- 5.5.13(k)(3)** After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of the previous test.
- 5.5.13(l)** Recordkeeping and reporting requirements for air curtain incinerators.
- 5.5.13(l)(1)** Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Health Officer approves another format, for at least 5 years.
- 5.5.13(l)(2)** Make all records available for submittal to the Health Officer or for an inspector's onsite review.
- 5.5.13(l)(3)** Submit an initial report no later than 60 days following the initial opacity test that includes the information specified in subdivisions 5.5.13(l)(3)(i) and 5.5.13(l)(3)(ii) below.
- 5.5.13(l)(3)(i)** The types of materials planned to be combusted in the air curtain incinerator.
- 5.5.13(l)(3)(ii)** The results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests.
- 5.5.13(l)(4)** Submit annual opacity test results within 12 months following the previous report.
- 5.5.13(l)(5)** Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of 5 years.

TABLE 1. EMISSION LIMITS FOR INCINERATORS THAT COMMENCED CONSTRUCTION ON OR BEFORE NOVEMBER 30, 1999, AND WERE NOT MODIFIED OR RECONSTRUCTED AFTER JUNE 1, 2001

Pollutant	Emission Limitation (7 percent oxygen, dry basis, except opacity)	Averaging Time	Compliance Determination by Performance Test Method 40 CFR 60, Appendix A
Cadmium	0.004 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29
Carbon Monoxide	157 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Methods 10, 10A, or 10B
Dioxins/furans (toxic equivalency basis)	0.41 Nanograms per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 23
Hydrogen Chloride	62 Parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run).	Method 26 or 26A
Lead	0.04 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29
Mercury	0.47 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	388 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Methods 7 or 7E
Particulate Matter	70 Milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Method 5 or 29
Sulfur Dioxide	20 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 6 or 6C
Opacity	10 Percent	Three 1-hour blocks consisting of ten 6-minute average opacity values	Method 9

TABLE 2. OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	Establish these operating limits	And Monitor Using These Minimum Frequencies		
		Data Measurement	Data Recording	Averaging Time (Calculated each hour as the average of the previous 3 operating hours)
Charge rate	Maximum charge rate	Continuous	Every hour	Daily (batch units). 3-hour rolling (continuous and intermittent units). ¹
Pressure drop across the wet scrubber or amperage to wet scrubber	Minimum pressure drop or amperage	Continuous	Every 15 minutes	3-hour rolling. ¹
Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling. ¹
Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling. ¹

TABLE 3. TOXIC EQUIVALENCY FACTORS

Dioxin/Furan Isomer	Toxic Equivalency Factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8- pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.001

TABLE 4. REPORTING REQUIREMENTS

Report	Due Date	Contents	Reference
Waste Management Plan	No later than the date specified for submittal of the final control plan.	<ul style="list-style-type: none"> Waste Management Plan 	5.5.11(z)
Initial Test Report	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> Complete test report for the initial performance test. The values for the site-specific operating limits. Installation of bag leak detection systems for fabric filters. 	5.5.11(aa)

¹ Calculated each hour as the average of the previous 3 operating hours.

Report	Due Date	Contents	Reference
Annual Report	<p>No later than 12 months following the submission of the initial test report.</p> <p>Subsequent reports are to be submitted no more than 12 months following the previous report.</p>	<ul style="list-style-type: none"> Name and address. Statement and signature by responsible official. Date of report. Values for the operating limits. Highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, (or 30-day average, if applicable) for each operating parameter recorded for the calendar year being reported. If a performance test was conducted during the reporting period, the results of the test. If a performance test was not conducted during the reporting period, a statement that the requirements of 5.5.9(bb) were met. Documentation of periods when all qualified CISWI operators were unavailable for more than 8 hours but less than 2 weeks. If performance tests are being conducted once every 3 years consistent with 5.5.9(bb), the date of the last 2 performance tests, a comparison of the emission level achieved in the last 2 performance tests to the 75 percent emission limit threshold required in 5.5.9(bb) and a statement as to whether there have been any operational changes since the last performance test that could increase emissions. Any malfunction, deviation, or continuous monitoring system out of control periods information as specified in 5.5.11(cc)(11) through (15) Fuel input information for energy recovery unit subcategory verification as specified in 5.5.11(cc)(16) 	5.5.11(bb)&(cc)
Emission Limitation or Operating Limit Deviation Report	<p>By August 1 for data collected during the first half of the calendar year (January – June). By February 1 of the following year for data collected during the second half of the calendar year (July – December).</p>	<ul style="list-style-type: none"> Dates and times of deviations. Averaged and recorded data for these dates. Duration and causes for each deviation and the corrective actions taken. Copy of operating limit monitoring data and any test reports. Dates, times, and causes for monitor downtime incidents. 	5.5.11(dd)(1) – (3)
Qualified Operator Deviation (QOD) Notification	Within 10 days of deviation	<ul style="list-style-type: none"> Statement of cause of deviation. Description of efforts to have an accessible qualified operator. The date a qualified operator will be accessible. 	5.5.11(dd)(4)(i)
QOD Status Report	Every 4 weeks following deviation.	<ul style="list-style-type: none"> Description of efforts to have an accessible qualified operator. The date a qualified operator will be accessible. Request for approval to continue operation. 	5.5.11(dd)(4)(ii)
QOD Notification of Resumed Operation	Prior to resuming operation.	<ul style="list-style-type: none"> Notification that operation will resume. 	5.5.11(dd)(4)(iii)

TABLE 5. EMISSION LIMITS FOR INCINERATORS THAT COMMENCED CONSTRUCTION AFTER NOVEMBER 30, 1999, BUT NO LATER THAN JUNE 4, 2010, OR COMMENCED MODIFICATION OR RECONSTRUCTION AFTER JUNE 1, 2001 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limitation (7 percent oxygen, dry basis, except opacity)	Averaging Time	Compliance Demonstration by Performance Test Method 40 CFR 60, Appendix A
Cadmium	0.0026 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Carbon Monoxide	17 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 10
Dioxins/furans (toxic mass basis)	4.6 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 23
Dioxins/furans (toxic equivalency basis)	0.13 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 23
Hydrogen Chloride	29 Parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run.)	Method 26 or 26A
Lead	0.015 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Mercury	0.0048 Milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), collect a minimum volume of 2 dry standard cubic meters. For Method 30B, collect a minimum sample as specified in Method 30B)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	53 Parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Method 7 or 7E
Particulate Matter	34 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Method 5 or 29
Sulfur Dioxide	11 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 6 or 6C
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period	Three 1-hour observation periods	Method 22 (Visible emission test)

TABLE 6. EMISSION LIMITS FOR ENERGY RECOVERY UNITS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limit (Liquid/Gas)	Emission Limit (Solids)	Averaging Time	Compliance Demonstration by Performance Test Method 40 CFR 60, Appendix A
Cadmium	0.023 Milligrams per dry standard cubic meter	Biomass—0.0014 milligrams per dry standard cubic meter. Coal—0.0017 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Carbon Monoxide	35 Parts per million by dry volume	Biomass—260 parts per million dry volume. Coal—95 parts per million dry volume.	3-run average (1 hour minimum sample time per run)	Method 10
Dioxins/furans (total mass basis)	2.9 Nanograms per dry standard cubic meter	Biomass—0.52 nanograms per dry standard cubic meter. Coal—5.1 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23
Dioxins/furans (toxic equivalency basis)	0.32 Nanograms per dry standard cubic meter	Biomass—0.12 nanograms per dry standard cubic meter. Coal—0.075 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23
Hydrogen Chloride	14 Parts per million by dry volume	Biomass—0.20 parts per million dry volume. Coal—58 parts per million dry volume.	3-run average (for Method 26, collect a minimum volume of 120 liters; for Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Method 26 or 26A
Lead	0.096 Milligrams per dry standard cubic meter	Biomass—0.014 milligrams per dry standard cubic meter. Coal—0.057 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Mercury	0.0024 Milligrams per dry standard cubic meter	Biomass—0.0022 milligrams per dry standard cubic meter. Coal—0.013 milligrams per dry standard cubic meter.	3-run average (For Method 29 and ASTM D6784-02, collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B.)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	76 Parts per million by dry volume	Biomass—290 parts per million dry volume. Coal—460 parts per million dry volume.	3-run average (for Method 7E, 1 hour minimum sample time per run)	Method 7 or 7E

Pollutant	Emission Limit (Liquid/Gas)	Emission Limit (Solids)	Averaging Time	Compliance Demonstration by Performance Test Method 40 CFR 60, Appendix A
Particulate Matter Filterable	110 Milligrams per dry standard cubic meter	Biomass—11 milligrams per dry standard cubic meter. Coal—130 milligrams per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Method 5 or 29 if the unit has an annual average heat input rate less than or equal to 250 MMBtu/hr; or PM CPMS (as specified in 5.5.9(x)) if the unit has an annual average heat input rate greater than 250 MMBtu/hr.
Sulfur Dioxide	720 Parts per million by dry volume	Biomass—7.3 parts per million dry volume. Coal—850 parts per million dry volume.	3-run average (1 hour minimum sample time per run)	Method 6 or 6C
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period.	Visible emissions for no more than 5% of the hourly observation period.	Three 1-hour observation periods	Method 22 (Visible emission test)

TABLE 7. EMISSION LIMITS FOR WASTE-BURNING KILNS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limitation ²	Averaging Time	Compliance Demonstration by Performance Test ^{3 4} Method 40 CFR 60, Appendix A
Cadmium	0.0014 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29
Carbon Monoxide	100 (long kilns)/790 (preheater/precalciner) parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 10
Dioxins/furans (total mass basis)	1.3 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23

² All emission limitations are measured at 7 percent oxygen (except for CEMS and integrated sorbent trap monitoring system data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

³ In lieu of performance testing, you may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as you comply with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in §§60.2710 and 60.2730. As prescribed in §60.2710(u), if you use a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, your averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.

⁴ Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in 5.5.9(y)(3). They are not subject to the CEMS, integrated sorbent trap monitoring system, or CPMS requirements that otherwise may apply to the main kiln exhaust.

Pollutant	Emission Limitation²	Averaging Time	Compliance Demonstration by Performance Test^{3 4} Method 40 CFR 60, Appendix A
Dioxins/furans (toxic equivalency basis)	0.075 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Method 23
Hydrogen Chloride	3.0 Parts per million by dry volume	3-run average (collect a minimum volume of 1 dry standard cubic meter) or 30-day rolling average if HCl CEMS is being used	If a wet or dry scrubber is used, performance test (Method 321 at 40 CFR 63, Appendix A). If a wet or dry scrubber is not used, HCl CEMS, as specified in 5.5.9(j).
Lead	0.014 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters)	Method 29
Mercury	0.011 Milligrams per dry standard cubic meter OR 58 pounds per million tons of clinker ⁵	30-day rolling average	Mercury CEMS or integrated sorbent trap monitoring system (Performance Specification 12A or 12B, respectively, of 40 CFR 60, Appendix B, and Procedure 5 of 40 CFR 60, Appendix F), as specified in 5.5.9(j).
Nitrogen Oxides	630 Parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Method 7 or 7E
Particulate Matter Filterable	13.5 Milligrams per dry standard cubic meter	30-day rolling average	PM CPMS (as specified in 5.5.9(x))
Sulfur Dioxide	600 Parts per million by dry volume	3-run average (for Method 6, collect a minimum of 20 liters; for Method 6C, 1 hour minimum sample time per run)	Method 6 or 6C

TABLE 8. EMISSION LIMITS FOR SMALL, REMOTE INCINERATORS THAT COMMENCED CONSTRUCTION ON OR BEFORE JUNE 4, 2010, OR THAT COMMENCED RECONSTRUCTION OR MODIFICATION AFTER JUNE 4, 2010 BUT NO LATER THAN AUGUST 7, 2013

Pollutant	Emission Limitation⁶	Averaging Time⁷	Compliance Demonstration by Performance Test Method 40 CFR 60, Appendix A
Cadmium	0.95 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 29
Carbon Monoxide	64 Parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Method 10

⁵ Equivalent Production-Based Limit – See rules 5.5.8(g), 5.5.9(ee), 5.5.10(v), and 5.5.11(II) for additional requirements.

⁶ All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the total mass basis limit or the toxic equivalency basis limit.

⁷ In lieu of performance testing, you may use a CEMS or, for mercury, an integrated sorbent trap monitoring system, to demonstrate initial and continuing compliance with an emissions limit, as long as you comply with the CEMS or integrated sorbent trap monitoring system requirements applicable to the specific pollutant in §§60.2710 and 60.2730. As prescribed in §60.2710(u), if you use a CEMS or integrated sorbent trap monitoring system to demonstrate compliance with an emissions limit, your averaging time is a 30-day rolling average of 1-hour arithmetic average emission concentrations.

Pollutant	Emission Limitation⁶	Averaging Time⁷	Compliance Demonstration by Performance Test Method 40 CFR 60, Appendix A
Dioxins/furans (total mass basis)	4,400 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Method 23
Dioxins/furans (toxic equivalency basis)	180 Nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 23
Hydrogen Chloride	300 Parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Method 26 or 26A
Lead	2.1 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Method 29 (Use ICPMS for the analytical finish.)
Mercury	0.0053 Milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02, collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum sample as specified in Method 30B at 40 CFR 60, Appendix A)	Method 29 or 30B or ASTM D6784-02 (Reapproved 2008)
Nitrogen Oxides	190 Parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Method 7 or 7E
Particulate Matter (Filterable)	270 Milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter)	Method 5 or 29
Sulfur Dioxide	150 Parts per million by dry volume	3-run average (for Method 6, collect a minimum of 20 liters per run; for Method 6C, 1 hour minimum sample time per run)	Method 6 or 6C
Fugitive ash	Visible emissions for no more than 5% of the hourly observation period	Three 1-hour observation periods	Method 22 (Visible emission test)

GUIDELINES AND STANDARD OPERATING PROCEDURES FOR ISSUANCE OF OPEN BURNING AUTHORIZATIONS

Revised August 14, 2024

I. General

Open burning in Jefferson County is prohibited. Exceptions may be granted under specific conditions that do not interfere with the maintenance of acceptable air quality or create a public nuisance. The circumstances in which Open Burning may be allowed are specified by Section 5.1.1 of the Jefferson County Board of Health Air Pollution Control Rules and Regulations and are subject to the conditions contained in these guidelines.

II. Authorized Open Burning

A. Subparagraph 5.1.1(a)(1) Open fires for the cooking of food for human consumption on other than commercial premises.

No written Open Burning Authorization or Notification is required for fires used for cooking of food including barbecues and outdoor fireplaces. Only clean fuel not containing garbage, rubbish, rubber, plastics, or other refuse is permitted. Open fires are allowed for cooking food for periodic fund-raising activities by not-for-profit charitable organizations. This exception to the Open Burning prohibition does not include commercial food preparation facilities and their operation.

B. Subparagraph 5.1.1(a)(2) Fires to abate a fire hazard, providing the hazard is so declared by the fire department or fire district having jurisdiction.

No written Open Burning Authorization or Notification is required for fires set to abate a fire hazard, providing the fires are set by or at the direction of responsible fire control agencies.

C. Subparagraph 5.1.1(a)(3) Fires set in salamanders or other devices used by construction or other workers for heating purposes.

Fires used for outdoor heating by workers or other individuals must be contained in noncombustible containers. Salamanders and other heating devices must use fuels appropriate for the devices and must be operated and maintained in a manner so as not to cause a public nuisance. Otherwise, only clean wood may be burned for heating in a noncombustible container. No trash, garbage, rubber, plastic, or other refuse or synthetic materials may be burned. Consideration will be given to ambient temperature and conditions for use of warming fires. Warming fires shall not be used during conditions of weather where temperature, humidity, and wind are not so uncomfortable as to require artificial heating.

D. Subparagraph 5.1.1(b)(1) Fires for recreational or ceremonial purposes.

No written Open Burning Authorization from the Air Pollution Control Program shall be required for fires set for recreational or ceremonial purposes. Any person or organization intending to set a fire for recreational or ceremonial purposes shall submit a written Notification on a form provided by the Air Pollution Control Program no later than three working days prior to the event. The person or organization is responsible for notifying the jurisdictional fire department and obtaining any fire department or other permits required for such activities. No trash, garbage, rubber, plastic, or other refuse or synthetic materials shall be burned.

E. Subparagraph 5.1.1(b)(2) Fires for training personnel in the method of fighting fires.

No written Open Burning Authorization from the Air Pollution Control Program shall be required for fires set for the training of firefighting personnel. Written notification must be submitted to the Air Pollution Control Program as detailed below. Training fires involving structures are subject to 40 CFR 61, Subpart M, National Emission Standard for Asbestos, which requires inspection of the structure for asbestos and compliance with notification, emission control, and waste disposal procedures.

1. Notification for training fires using materials other than structures require written notification on a form provided by the Air Pollution Control Program no later than ten working days prior to the training exercise. The notification shall include, as a minimum, the purpose of the training exercise, the types of materials to be burned, the location, date, time, and duration of the training exercise.
2. Training fires using structures.
 - a. The structure must be thoroughly inspected for the presence of asbestos containing materials according to 40 CFR 61, Paragraph 61.145(a).
 - b. Asbestos containing materials must be removed prior to the burning and demolition of the structure.
 - c. Removal of asbestos containing materials must be done by qualified personnel according to Alabama Department of Environmental Management, EPA, and OSHA standards. Written notification for removal of asbestos containing materials must be submitted at least 10 working days prior to beginning removal activities, according to 40 CFR 61, Paragraph 61.145(b). Written notification for demolition of structures that do not contain asbestos containing materials must be submitted at least 10 working days prior to beginning demolition activities, according to 40 CFR 61, Paragraph 61.145(b).

- d. In addition to the notification requirements of 40 CFR 61, Paragraph 61.145(b), written notification on a form provided by the Air Pollution Control Program must be received no later than ten working days prior to the training exercise. The notification shall include, as a minimum, the purpose of the training exercise, the types of materials to be burned, the location, date, time, and duration of the training exercise.
 - e. Removal and disposal of asbestos containing materials must be done in accordance with all emission control and waste disposal procedures of 40 CFR 61, Subpart M.
 - f. All asphaltic materials such as roofing shingles, rubber, plastic, and other hazardous materials must be removed from the structure prior to burning.
3. The burning site or structure to be used in a training exercise designed to involve a large fire and/or a large volume of smoke shall meet the following minimum distance requirements:
 - a. At least 500 feet from the nearest inhabited dwelling.
 - b. At least 150 feet from any public road.
 4. No burning for a training exercise shall be commenced during any stage of an official air pollution episode.
 5. The exemption from the prohibition of open burning provided by Paragraph 5.1.2(b) is intended only for official training exercises for firefighting personnel, and does not apply where the primary purpose of the fire is the destruction and removal of the structure.

F. Subparagraph 5.1.1(c)(1) Fires set for recognized agricultural, silvicultural, range and wildlife management practices.

Written authorization from the Air Pollution Control Program is required for fires set in the management of forestry, agricultural, and park lands. No authorizations shall be issued during the months of April, May, June, July, August, September, or October. Agricultural burning shall be limited to commercial operations, not to include backyard gardens and lawns.

G. Subparagraph 5.1.1(c)(2) Fires for prevention or control of disease or pests, where no other practical or effective method of control is available.

Written authorization from the Air Pollution Control Program is required for fires for prevention or control of disease or pests. A written application on a form provided by the Program shall be received no later than three working days prior to the planned open burning. Such application shall state at a minimum the nature of the problem, the lack of alternative control methods, the procedures to be used, the date, time, and location of the burning, and compliance with any other applicable regulations.

H. Subparagraph 5.1.1(c)(3) Fires for disposing of vegetation grown on that tract of land.

Written authorization from the Air Pollution Control Program is required for fires set to burn vegetation for the clearing of land. Authorizations issued for this purpose in the former TSP non-attainment areas, or any future designated particulate non-attainment areas, require strict adherence to the use of the air curtain incinerator (trench burner) method, or equivalent. The following conditions shall be met:

1. All conditions on Authorization form shall be met.
2. All materials to be burned shall be dry and in all respects be in a state to sustain good combustion.
3. The amount of dirt in the material to be burned shall be minimized.
4. Asphaltic materials, rubber, plastic, tires, demolition or construction waste, or any material other than vegetation shall not be burned.
5. Only trees and brush from the authorized clearing site shall be burned. Material shall not be trucked in from other sites.
6. Burning shall commence after 9:00 a.m., and no new material shall be charged to the fire after 3:00 p.m. on any day for which the authorization is valid.
7. No burning shall be commenced during any stage of an official air pollution episode, or during any wildfire hazard alerts issued by the Alabama Forestry Commission. No material shall be added to an open fire during any such designated period. All open fires shall be extinguished during any stage of an official air pollution episode or wildfire hazard alert.
8. The authorization may be revoked at any time if any of the conditions of the authorization are violated or if the burning at any time is deemed by the Health Officer or his authorized representative to create, or has the potential to create, a public health nuisance.
9. The burning site shall meet the minimum distances specified in Appendix A, Table I.
10. The Fire Department which has jurisdiction over the burning area and/or the Alabama Forestry Commission shall be contacted before burning.

I. Subparagraph 5.1.1(c)(4) Any other open fires specifically or expressly approved by the Health Officer.

Written authorization from the Air Pollution Control Program is required. Authorizations issued for this purpose in the former TSP non-attainment areas, or any future designated particulate non-attainment areas, require strict adherence to the use of the air curtain incinerator (trench burner) method. The following conditions shall be met:

1. All conditions on Authorization form shall be met.
2. All materials to be burned shall be dry and in all respects be in a state to sustain good combustion.

3. The amount of dirt in the material to be burned shall be minimized.
4. Asphaltic materials, rubber, plastic, tires, demolition or construction waste, or any material other than vegetation shall not be burned.
5. Burning shall commence after 9:00 a.m., and no new material shall be charged to the fire after 3:00 p.m. on any day for which the authorization is valid.
6. No burning shall be commenced during any stage of an official air pollution episode, or during any wildfire hazard alerts issued by the Alabama Forestry Commission. No material shall be added to an open fire during any such designated period. All open fires shall be extinguished during any stage of an official air pollution episode or wildfire hazard alert.
7. The authorization may be revoked at any time if any of the conditions of the authorization are violated or if the burning at any time is deemed by the Health Officer or his authorized representative to create, or has the potential to create, a public health nuisance.
8. The burning site shall meet the minimum distances specified in Appendix A, Table I.
9. The Fire Department which has jurisdiction over the burning area and/or the Alabama Forestry Commission shall be contacted before burning.

III. Fees

Fees shall be charged for the evaluation of sites for written authorizations under Paragraph 5.1.1(c) of the Jefferson County Board of Health Air Pollution Control Rules and Regulations, according to the latest fee schedule adopted by the Board of Health. Fees are charged for the site evaluation and are applicable even if authorization is denied. All site evaluation fees shall be paid in full before any written authorization is issued.

No fees shall be charged for open burning subject to Paragraphs 5.1.1(a) and 5.1.1(b) of the Jefferson County Board of Health Air Pollution Control Rules and Regulations.

APPENDIX A

TABLE I

With Air Curtain Incineration		Without Air Curtain Incineration	
Roads	150 feet	Roads	250 feet
Residences	500 feet	Residences	1000 feet
Businesses	500 feet	Businesses	1000 feet
Schools, Day Cares, etc.	1500 feet	Schools, Day Cares, etc.	1½ mile
Hospitals, Nursing Homes, and other care facilities	1500 feet	Hospitals, Nursing Homes, and other care facilities	1½ mile
Parks, Athletic Fields, and Recreational Areas	1500 feet	Parks, Athletic Fields, and Recreational Areas	1½ mile
Community Activity and Gathering Centers	1500 feet	Community Activity and Gathering Centers	1½ mile

CHAPTER 6 – CONTROL OF PARTICULATE EMISSIONS

(Adopted January 28, 1972. Revised November 12, 1986; May 11, 1988; June 14, 1989; December 8, 1993; March 11, 1998; December 9, 1998; November 12, 2003; November 12, 2008; and August 14, 2024)

6.1 Visible Emissions.

6.1.1 Visible Emissions Restrictions for Stationary Sources.

6.1.1(a) Except as provided in Paragraphs 6.1.1(b)(c)(d) or (e), and Section 6.1.3 of this rule, no person shall discharge into the atmosphere from any source of emission, particulate of an opacity greater than that designated as twenty percent (20%) opacity, as determined by a six (6) minute average.

6.1.1(b) For a person not covered by Sections 6.1.3, 6.1.4, 6.1.5, and 6.1.6 of this rule, during one six (6) minute period in any sixty (60) minute period, a person may discharge into the atmosphere from a source of emission, particulate of an opacity not greater than that designated as forty percent (40%) opacity.

6.1.1(c) Reserved. (August 14, 2024)

6.1.1(d) The Health Officer may also approve exceptions to this Section in accordance with the following provisions:

6.1.1(d)(1) The owner or operator of the affected source shall request in writing for the Health Officer to provide an opportunity for the determination of the opacity of emissions during sampling and testing required pursuant to Part 1.10.

6.1.1(d)(2) Upon receipt from such owner or operator of the written report of the results of the sampling and testing conducted pursuant to Part 1.10, the Health Officer will make a finding concerning compliance with opacity and other applicable standards.

6.1.1(d)(3) If the Health Officer determines that an affected source is in compliance with all applicable standards for which the sampling and testing are being conducted in accordance with Part 1.10 but during such sampling and testing fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Health Officer within ten (10) days of receipt of notification to make appropriate adjustment to the opacity standard for the affected source.

6.1.1(d)(4) The Health Officer may grant such a petition upon a demonstration by the owner or operator that the affected source and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the sampling and testing; that such sampling and testing were performed under the conditions established by the Health Officer; and that the affected source and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

6.1.1(d)(5) Upon the conclusion of sampling and testing as required above, the Health Officer may establish an opacity standard for the affected source at a level at which the source will be able, as indicated by the sampling and testing, to meet the opacity standard at all times during which the source is meeting the mass emissions standards. If sufficient data is not available to the Health Officer to establish such opacity standards, the Health Officer may require additional sampling and testing as necessary to make such a determination of opacity.

6.1.1(e) The provisions of this Section shall not apply to combustion sources in single-family and duplex dwellings where such sources are used for heating or other domestic purposes.

6.1.2 Compliance with opacity standard in this Part shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A, 40 CFR Part 60, as the same may be amended requiring a six (6) minute average as determined by twenty-four (24) consecutive readings, at intervals of fifteen (15) seconds each.

6.1.3 The conditions in Section 6.1.4 apply to each emissions unit that meets all of the following requirements:

6.1.3(a) A Continuous Opacity Monitoring System (COMS) is used for indication of opacity of emissions;

6.1.3(b) With respect to opacity limitations, the units are subject only to the opacity provisions stated in Section 6.1.1; and

6.1.3(c) The COMS system utilized is required to comply with the requirements of 40 CFR 60.13 or 40 CFR 75.14 (if applicable) and is required to be certified in accordance with the requirements of 40 CFR 60, Appendix B, Performance Specification 1.

- 6.1.4** Except as otherwise exempt under Paragraphs 6.1.1(c) or 6.1.1(d) of this rule, no permittee shall discharge into the atmosphere from any source of emission, particulate of an opacity greater than that designated as twenty percent (20%) opacity, as determined by a six (6) minute average, except that during each calendar quarter, the permittee may discharge into the atmosphere from any emissions unit qualifying under Section 6.1.3 of this rule, particulate with an opacity exceeding 20% for not more than twenty-four (24), six (6) minute periods in any calendar day, if such periods do not exceed 2.0 percent of the source calendar quarter operating hours for which the opacity standard is applicable and for which the COMS is indicating valid data.
- 6.1.5** No permittee shall discharge into the atmosphere from any source of emission particulate of an opacity greater than 22% (excluding exempt periods allowed under Paragraphs 6.1.1(c) and 6.1.1(d) of this rule) averaged over each calendar day.
- 6.1.6** For a person subject to Section 6.1.4 of this rule, compliance with the opacity standards of this rule shall be determined by COMS data.
- 6.1.7** For emissions units described in Section 6.1.3 above, the permittee shall comply with Sections 6.1.4 and 6.1.5 within 6 months of EPA approval of Sections 6.1.3, 6.1.4, 6.1.5, and 6.1.6. Until 6 months after EPA approval of Sections 6.1.3, 6.1.4, 6.1.5, and 6.1.6, emissions units described by Section 6.1.3 shall be subject to the emission limit in Paragraph 6.1.1(a) of this rule, the exceptions in Paragraphs 6.1.1(b), (c) and (d) of this rule, and the compliance measurement techniques in Section 6.1.2 of this rule.
- 6.1.8** Nothing in Section 6.1.4 shall be construed to supersede the validity of opacity readings taken under Section 6.1.2 of this Rule.

6.2 Fugitive Dust.

- 6.2.1** No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:
 - 6.2.1(a)** Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - 6.2.1(b)** Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stock piles, and other surfaces which create airborne dust problems; and
 - 6.2.1(c)** Installation and use of hoods, fans, and fabric filters (or other suitable control devices) to enclose and vent the handling of dust materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
- 6.2.2** Visible Emissions Restrictions Beyond Lot Line. No person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate.
- 6.2.3** When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any rule or regulation, the Health Officer may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

6.3 Fuel Burning Equipment.

- 6.3.1** No person shall cause or permit the emission of particulate matter from fuel-burning equipment in excess of the amount shown in Table 6-1 for the heat input allocated to such source. Interpolation of the data in Table 6-1 for heat input values between 10 million BTU/hr and 250 million BTU/hr shall be accomplished by the use of the equation:

$$E = 1.38 H^{-0.44}$$

where:

E = Emissions in lb/million BTU

H = Heat input in millions of BTU/hr

6.3.2 For purposes of this Part, the total heat input from all similar fuel combustion units which discharge particulate matter through a common stack at a plant or premises shall be used for determining the maximum allowable emission particulate matter.

TABLE 6-1

ALLOWABLE PARTICULATE MATTER EMISSION BASED ON HEAT INPUT

Heat Input Millions of BTU/hr	Allowable Emissions (lb/million BTU)
1	0.5
10	0.5
20	0.37
40	0.27
60	0.23
80	0.2
100	0.18
150	0.15
200	0.13
250	0.12
1,000,000	0.12

6.4 Process Industries - General.

6.4.1 No person shall cause or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 6-2 for the process weight per hour allocated to such source. Interpolation of the data in Table 6-2 for the process weight per hour values up to 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 3.59p^{0.62}$$

for $p < 30 \frac{\text{tons}}{\text{hr}}$

and interpolation and extrapolation of the data for process weight per hour values equal to or in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 17.31p^{0.16}$$

for $p \geq 30 \text{ tons/hr}$

where:

E = Emissions in pounds per hour

p = Process weight per hour in tons per hour

6.4.1(a) For the existing four (4) sinter machines in Jefferson County, the allowable filterable particulate limit from each windbox exhaust shall not exceed .030 grains per dry standard cubic foot with the additional requirement that total filterable particulate emissions from all windbox exhausts and discharge ends not exceed 140 pounds per hour.

Compliance with the total emission limit shall be achieved by operating no more than three (3) of the four (4) sinter machines simultaneously.

6.4.2 Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.

6.4.3 For purposes of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.

TABLE 6-2

ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)
100	0.56
500	1.52
1,000	2.34
5,000	6.33
10,000	9.76
20,000	14.97
60,000	29.83
80,000	31.23
120,000	33.33
160,000	34.9
200,000	36.17
1,000,000	46.79

6.5 Small Foundry Cupola.

- 6.5.1** No Person shall cause or permit the emission of particulate matter in any one hour from any small foundry cupola source in excess of the amount shown in Table 6-3 for the process weight per hour allocated to such source.
- 6.5.2** Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.
- 6.5.3** For purposes of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.
- 6.5.4** Foundry cupolas with a process weight rate greater than 50,000 pounds per hour shall be subject to the rules and regulations of Part 6.4.

TABLE 6-3

ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE FOR SMALL FOUNDRY CUPOLAS

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)
1,000	3.05
2,000	4.7
3,000	6.35
4,000	8
5,000	9.58
6,000	11.3
7,000	12.9
8,000	14.3
9,000	15.5
10,000	16.65
12,000	18.7
16,000	21.6
18,000	23.4
20,000	25.1

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)
30,000	31.3
40,000	37
50,000	42.4

6.6 Cotton Gins.

- 6.6.1** No person shall cause or permit the emission of particulate matter in any one hour from any cotton gin operation in excess of the amount shown in Table 6-4 for the process weight per hour allocated to such operation. Particulate matter emissions subject to this Part include process emissions and incinerator emissions if any; provided, however, that this shall in no way relieve or affect the application of Chapter 5 to open burning and incineration at cotton gin operations.
- 6.6.2** Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.
- 6.6.3** For purposes of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.

TABLE 6-4

ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE FOR COTTON GINS

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)
1,000	1.6
1,500	2.4
2,000	3.1
2,500	3.9
3,000	4.7
3,500	5.4
4,000	6.2
5,000	7.7
6,000	9.2
7,000	10.7
8,000	12.2
9,000	13.7
10,000	15.2
12,000	18.2
14,000	21.2
16,000	24.2
18,000	27.2
20,000	30.1
30,000	44.9
40,000	59.7
50,000	64
60,000 or more	67.4

6.7 Kraft Pulp Mills.

- 6.7.1** Applicability. This part applies to manufacturing facilities for pulping of wood and the preparation and recovery of associated chemicals by the kraft process, including combined recovery systems serving other processes such as neutral sulfite pulping.
- 6.7.2** No person shall cause or permit the emission of particulate matter from any kraft pulp mill in excess of the amounts provided as follows:
- 6.7.2(a)** From all recovery furnaces, not more than 4.0 pounds per ton of pulp.
- 6.7.2(b)** From all smelt dissolver vents, not more than 0.5 pounds per ton.
- 6.7.2(c)** From all lime kilns, not more than 1.0 pounds per ton of pulp.
- 6.7.3** The pulp production rates for kraft mills referred to in this part shall be tons of unbleached air-dried kraft pulp.
- 6.7.4** Notwithstanding the specific limits set forth in this Part, in order to maintain the lowest possible emissions of air contaminants, the highest and best practical treatment and control for particulate matter currently available shall be provided for new kraft pulp mills.
- 6.8 Wood Waste Boilers.**
- 6.8.1** Applicability. This part applies to boilers and other indirect heat exchangers using not less than 30% wood wastes or wood by-products as fuel measured by heat input.
- 6.8.2** No person shall cause or permit the emission of particulate matter from any existing wood wastes boilers in excess of 0.30 grains per standard dry cubic foot adjusted to 50% excess air, provided that: for any existing wood wastes boiler which must be modified in order to meet the emission limitations of this part, no person shall cause or permit the emission of particulate in excess of:
- 6.8.2(a)** 0.17 grains per standard dry cubic foot, adjusted to 50% excess air for combination gas and wood wastes boilers.
- 6.8.2(b)** 0.20 grains per standard dry cubic foot, adjusted to 50% excess air for combination oil and wood wastes boilers.
- 6.8.2(c)** 0.23 grains per standard dry cubic foot, adjusted to 50% excess air for combination coal and wood wastes boilers.
- 6.8.2(d)** 0.20 grains per standard dry cubic foot, adjusted to 50% excess air for boilers using wood wastes only.
- 6.9 Coke Ovens.**
- 6.9.1** Applicability. The provisions of this part (except 6.9.10) shall apply to the production of coke in existing conventional slot-oven coke batteries.
- 6.9.2** Unloading and Transfer of Coal and Coke. Every person operating coke ovens shall apply all reasonable measures to prevent emissions from coal unloading, transfer, and coke transfer.
- 6.9.3** Charging. There shall be no visible emissions during the charging cycle from the charging holes or the larry car of any battery with an opacity which is greater than twenty percent (20%) except for an average period or periods not to exceed three (3) minutes of any consecutive sixty (60) minutes on batteries with less than seventy (70) ovens nor more than four (4) minutes of any consecutive sixty (60) minutes on batteries with seventy (70) ovens or more.
- 6.9.4** Pushing. There shall be no visible emissions during the pushing cycle, other than water mist or vapor, with an opacity which is greater than forty percent (40%) for more than one (1) push per hour per battery or for more than two (2) consecutive pushes from the same oven.
- 6.9.5** Topside Emissions.
- 6.9.5(a)** Any leak discovered on the topside of a battery shall be wet sealed or the oven shall not be recharged until the necessary repairs are made.
- 6.9.5(b)** At no time shall there be leaks in more than ten percent (10%) of the offtake piping and no more than five percent (5%) of the charging hole lids on any one battery.
- 6.9.6** Coke Oven Doors.
- 6.9.6(a)** There shall be no visible emissions, except non-smoking flame, from any opening on the coke oven doors from more than fifteen percent (15%) of the coke oven doors on any battery at any time.

6.9.6(b) If a self-sealing door fails to seal during the coking cycle, it shall be adjusted, repaired or replaced prior to a subsequent charge of that oven.

6.9.6(c) Luted doors which fail to seal after the oven is charged shall be reluted promptly.

6.9.6(d) Every person operating coke ovens shall have a facility to maintain and repair coke oven doors, and shall maintain an inventory of one (1) coke oven door per twelve (12) ovens operated.

6.9.7 Oven Maintenance.

6.9.7(a) All ovens shall be maintained in good condition to promote complete coking of coal.

6.9.7(b) All coke oven cracks are to be sealed as soon as practicable after they are detected.

6.9.7(c) As directed by the Health Officer, reasonable records of the maintenance of oven doors, oven burners, and oven interiors are to be made and retained for a reasonable time.

6.9.8 Combustion Stacks. There shall be no visible emissions, other than water mist or vapor, with an opacity greater than twenty percent (20%) from any stack except for a period or periods aggregating not more than three (3) minutes in any consecutive sixty (60) minutes.

6.9.9 Quenching.

6.9.9(a) No person shall operate a coke oven plant without baffles installed and properly operating in the quench towers.

6.9.9(b) Water introduced to the quenching station must be of a quality approved by the Health Officer.

6.9.10 Notwithstanding the specific limits set forth in this Rule, in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control for particulate matter currently available shall be provided for any new coke producing facilities.

6.10 Cement Plants.

6.10.1 Applicability. This Part applies to existing cement plants that have a process weight that is greater than 88.7 tons per hour; this part also applies to new cement plants.

6.10.2 Emission Limits.

6.10.2(a) No owner or operator shall cause, permit, or allow the emission of particulate matter from the kiln which is in excess of 0.30 lbs per ton of feed to the kiln, maximum two (2) hour average.

6.10.2(b) No owner or operator shall cause, permit, or allow the emissions of particulate matter from the clinker cooler which is in excess of 0.10 lbs per ton of feed to the kiln, maximum two (2) hour average.

6.11 Reserved.

6.12 Xylene Oxidation Process.

6.12.1 Applicability. The provisions of this Rule shall apply to all xylene oxidation processes. Each process system shall be considered as a separate process unit.

6.12.2 No person shall cause or permit the emissions of particulate matter in any one hour from any xylene oxidation process in excess of the amount calculated by use of the equations:

$$\begin{array}{ll} E = 2.75 P^{0.62} & E = 13.15 P^{0.16} \\ (P < 30 \text{ tons/hr}) & (P \geq 30 \text{ tons/hr}) \end{array}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

6.12.3 Where a thermal oxidizer is used for the reduction of process waste from a xylene oxidation process and no other waste streams are added, this thermal oxidizer shall be considered a part of the process system.

CHAPTER 7 – CONTROL OF SULFUR COMPOUNDS

(Adopted January 28, 1972. Revised October, 1984; and September 14, 1988, June 14, 1989, October 14, 1992, March 11, 1998, May 13, 2009, May 11, 2016; and August 14, 2024.)

7.1 Fuel Combustion.

- 7.1.1** No person shall cause or permit the operation of a fuel burning installation in such a manner that sulfur oxides, measured as sulfur dioxide, are emitted in excess of 1.8 pounds per million BTU heat input.
- 7.1.2** Air Quality Demonstration. In addition to the requirements of Section 7.1.1, every owner or operator of a fuel burning installation having a total rated capacity greater than 1500 million BTU per hour shall:
- 7.1.2(a)** Demonstrate, to the satisfaction of the Health Officer, that the sulfur oxides emitted, either alone or in contribution to other sources, will not interfere with attainment and maintenance of any primary or secondary ambient air quality standard prescribed at Part 1.7.
- 7.1.2(b)** Demonstrate, to the satisfaction of the Health Officer, that in meeting the emission limitations of Section 7.1.1, the installation will not increase emissions to the extent that resulting air quality concentrations will be greater than:
- 7.1.2(b)(1)** Those concentrations (either measured or calculated) which existed in 1970; or
- 7.1.2(b)(2)** Those concentrations (either measured or calculated) which existed during the first year of operation of any installation which began operating after January 1, 1970.
- 7.1.2(c)** Upon the direction of the Health Officer, install and maintain air quality sensors to monitor attainment and maintenance of ambient air quality standards in the areas influenced by the emissions from such installation. Results of such monitoring shall be provided to the Health Officer in a manner and form as he shall direct.
- 7.1.3** All calculations performed pursuant to demonstrations required by Section 7.1.2 shall assume that the fuel burning installation is operating at or above the maximum capacity which such installation is capable of being operated.
- 7.1.4** For purpose of this part, the total heat input from all similar fuel combustion units at a plant, premises, or installation shall be used for determining the maximum allowable emissions of sulfur dioxide that passes through a stack or stacks.
- 7.1.5** No person shall cause or permit the emission or combustion of any refinery process gas stream that contains H₂S in concentrations greater than 150 ppm without removal of the hydrogen sulfide in excess of this concentration.

7.2 Sulfuric Acid Plants.

No person shall cause or permit sulfur dioxide tail gas emissions from sulfuric acid manufacturing plants to exceed 6.5 lb/ton of 100 percent sulfuric acid produced. The tail gas acid mist emissions are not to exceed 0.5 lb/ton of sulfuric acid produced and the sulfur trioxide emissions are not to exceed 0.2 lb/ton of sulfuric acid produced.

7.3 Sulfur Recovery Plants.

- 7.3.1** No person shall cause or permit the sulfur oxide emission from any existing sulfur recovery plant recovering sulfur from natural gas to exceed 0.16 pounds per pound of sulfur processed.
- 7.3.2** Except as provided by Section 7.3.1, no person shall cause or permit the sulfur oxide emission from a sulfur recovery plant to exceed 0.08 pounds per pound of sulfur processed.

7.4 Reserved.

7.5 Reserved.

7.6 TR SO₂ Trading Program

The Alabama Department of Environmental Management Regulations governing the TR SO₂ Trading Program (335-3-5-.06 through 335-3-5-.36) are incorporated by reference. Amendments to these rules after August 14, 2024 will be automatically adopted upon their effective date.

CHAPTER 8 – CONTROL OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS

(Initial Chapter 8 adopted January 28, 1972. Adopted January 9, 1980; Revised February 11, 1981; September 8, 1982; November 13, 1985; April 8, 1987; September 13, 1989; October 10, 1990; November 14, 1990; May 8, 1991; September 11, 1991; March 11, 1998; October 13, 1999; June 14, 2000; May 8, 2002; May 10, 2006; and May 11, 2016)

8.1 Applicability.

(Revised October 10, 1990).

8.1.1 The provisions of Chapter 8 shall apply to all sources of Volatile Organic Compounds (VOC) in accordance with schedules contained in Part 8.15 except:

8.1.1(a) Sources specifically exempted under any Part or Section of Chapter 8 through annual operating, production, or potential VOC emissions rates.

8.1.1(b) Sources used exclusively for chemical or physical analysis or determination of product quality and commercial acceptance provided:

8.1.1(b)(1) the operation of the sources is not an integral part of the production process; and

8.1.1(b)(2) the emissions from sources do not exceed 363 kilograms (800 pounds) in any calendar month.

8.1.2 Fifty-five (55) gallons of all low-use coatings in the aggregate may be exempted on a plantwide basis (not per point emissions source) from regulations under Chapter 8 provided the following conditions are complied with: (Adopted May 8, 1991).

8.1.2(a) prior written approval from the Health Officer is obtained,

8.1.2(b) all applicable air permits contain permit provisos requiring recordkeeping in accordance with Section 8.11.12, and

8.1.2(c) the fifty-five (55) gallon usage rate is based on an annual rolling average.

8.2 VOC Water Separation.

8.2.1 No person shall use any compartment of any single or multiple compartment VOC water separator which receives effluent water containing 1,000 gallons a day or more of any VOC from processing, refining, treating, storing, or handling VOCs, unless such compartment is equipped with one of the following vapor loss control devices, properly installed, in good working order, and in operation:

8.2.1(a) a container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gas-tight, except when gauging or sampling is performed.

8.2.1(b) a container equipped with a floating roof consisting of a pontoon type, double-deck type roof or internal floating cover which shall rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and containing walls. All gauging or sampling devices shall be gas-tight, except when gauging or sampling is performed.

8.2.1(c) a container equipped with a vapor recovery system consisting of a vapor gathering system capable of collecting the VOC vapors and gases dispersed and a vapor disposal system capable of processing such VOC vapors and gases so as to prevent their emission into the atmosphere. All container gauging and sampling devices shall be gas-tight, except when gauging or sampling is performed.

8.2.1(d) a container having other equipment of equal efficiency for purposes of air pollution control as may be approved by the Health Officer.

8.3 Loading and Storage of VOC.

8.3.1 For the purposes of this Part, any stationary storage tank containing a VOC with a true vapor pressure of 78 millimeters of mercury (1.5 psia) or greater under actual storage conditions shall be subject to the requirements of this Part. (Revised October 10, 1990).

8.3.2 No person shall:

- 8.3.2(a)** place, store, or hold in any stationary storage vessel of more than 1,000-gallon capacity any VOC unless such vessel is a pressure tank or is equipped with a permanent submerged fill pipe or bottom fill pipe (storage vessels in existence prior to January 30, 1973 may employ portable submerged fill pipe).
- 8.3.2(b)** place, store, or hold in any stationary storage vessel of more than 40,000 gallon capacity any VOC unless such vessel is equipped with one of the following vapor loss control devices, as appropriate:
- 8.3.2(b)(1)** Liquids of intermediate volatility (liquids having a true vapor pressure under actual storage conditions of greater than 78 mmHg (1.5 psia) but not greater than 570 mmHg (11.0 psia)) shall be stored in vessels equipped with a floating roof or a vapor recovery system or an equivalent control system. A floating roof may be a double-deck, or flexible single-deck, pontoon-type cover which rests upon and is supported by the stored liquid, and shall be equipped with a closure seal or seals to close the space between the roof edge and the tank wall. All tank gauging and sampling devices shall be airtight except when sampling or tank gauging is performed.
- 8.3.2(b)(2)** Liquids of high volatility (liquids having a true vapor pressure under actual storage conditions of greater than 570 mmHg (11.0 psia)) shall be stored in vessels equipped with vapor recovery systems or equivalent vapor control systems. A vapor recovery system includes a system of collecting vapors and gases so as to prevent their emissions to the atmosphere. All tank gauging or sampling devices shall be airtight except when sampling or tank gauging is performed.
- 8.3.2(b)(3)** other equipment of equal efficiency for purposes of air pollution control as may be approved by the Health Officer.
- 8.3.2(c)** Load any VOCs into any transport vessel or transport container having a capacity in excess of 200 gallons from any terminal or bulk storage facility unless such terminal or facility is:
- 8.3.2(c)(1)** equipped with:
- 8.3.2(c)(1)(i)** a vapor collection system or its equivalent, properly installed, in good working order, with a loading arm equipped with a vapor collection adaptor of pneumatic, hydraulic, or other mechanical means which will provide a vapor-tight seal between the adaptor and the hatch; or
- 8.3.2(c)(1)(ii)** a loading system which will result in a submerged fill either with a submerged fill pipe or by loading from the bottom, and, with loading lines equipped with fittings which make vapor-tight connections and which will close automatically when disconnected; and
- 8.3.2(c)(2)** for hatch-loading, equipped with a means to prevent liquid organic compound drainage from the loading device when it is removed from the hatch of any transport vessel or transport container.
- 8.3.3** This part shall not apply to crude petroleum produced, separated, treated, or stored in the field.

8.4 Fixed-Roof Petroleum Liquid Storage Vessels.

8.4.1 For the purpose of this Part, the following definitions apply:

- 8.4.1(a)** "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.
- 8.4.1(b)** "Crude Oil" means a naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid in the reservoir at standard conditions.
- 8.4.1(c)** "Custody Transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other form of transportation.
- 8.4.1(d)** "External Floating Roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- 8.4.1(e)** "Internal Floating Roof" means a cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- 8.4.1(f)** "Petroleum Liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.

- 8.4.1(g)** "Petroleum Refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.
- 8.4.2** This Part shall apply to all fixed roof storage vessels with capacities greater than 151,416 liters (40,000 gallons) containing petroleum liquids whose true vapor pressure (TVP) is greater than 78 mmHg (1.5 psia) under actual storage conditions. Vessels containing petroleum liquids whose TVP is equal to or less than 78 mmHg (1.5 psia) are exempt, provided that records are maintained of the average monthly storage temperature and TVP of the petroleum liquid stored if the product has a stored TVP greater than 52 mmHg (1.0 psia). (Revised October 10, 1990).
- 8.4.3** This Part shall not apply to petroleum liquid storage vessels:
- 8.4.3(a)** equipped with external floating roofs before July 1, 1979;
- 8.4.3(b)** having capacities less than 1,601,224 liters (423,000 gallons) used to store produced crude oil and condensate prior to lease custody transfer.
- 8.4.4** Except as provided under Section 8.4.3, no owner or operator of an affected source under Section 8.4.2 shall permit the use of such source unless:
- 8.4.4(a)** the source has been retrofitted with an internal floating roof equipped with a closure seal or seals to close the space between the roof edge and tank wall; or
- 8.4.4(b)** the source has been retrofitted with equally effective alternative control equipment, approved by the Health Officer; and (Revised October 10, 1990).
- 8.4.4(c)** the source is maintained such that there are no visible holes, tears, or other openings in the seal fabric or materials; and
- 8.4.4(d)** all openings, except stub drains are equipped with covers, lids, or seals such that:
- 8.4.4(d)(1)** the cover, lid, or seal is in the closed position at all times except when in actual use; and
- 8.4.4(d)(2)** automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg support; and
- 8.4.4(d)(3)** rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting; and
- 8.4.4(e)** routine inspections are conducted through roof hatches once every six months; and
- 8.4.4(f)** a complete inspection of cover and seals is conducted whenever the tank is emptied for nonoperational reasons.
- 8.5 Bulk Gasoline Plants.**
- 8.5.1** For the purpose of this Part, the following definitions apply:
- 8.5.1(a)** "Bottom Filling" means the filling of a gasoline tank truck or stationary storage tank through an opening that is flush with the tank bottoms.
- 8.5.1(b)** "Bulk Gasoline Plant" means a gasoline storage and distribution facility with an average daily throughput equal to or less than 75,708 liters (20,000 gallons) of gasoline per day averaged over the work days in one calendar year which receives gasoline from bulk terminals by gasoline tank truck or trailer, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and gasoline dispensing facilities.
- 8.5.1(c)** "Splash Filling" means the filling of a gasoline tank truck or stationary tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.
- 8.5.1(d)** "Vapor Balance System" means a combination of pipes or hoses which create a closed system between the vapor spaces of an unloading and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.
- 8.5.2** This Part shall apply to the unloading, loading, and storage operations of all bulk gasoline plants and all gasoline tank trucks or trailers delivering or receiving gasoline at bulk gasoline plants, except stationary storage tanks of less than 3,785 liters (1,000 gallons) capacity.

- 8.5.3** Except as provided under Section 8.5.2, no owner or operator of a bulk gasoline plant shall permit stationary storage tanks to be loaded or unloaded with gasoline unless each tank is equipped with a vapor balance system as described under Section 8.5.6 and approved by the Health Officer; and
- 8.5.3(a)** each tank is equipped with a submerged or bottom fill pipe, approved by the Health Officer (Revised October 10, 1990); or
- 8.5.3(b)** each tank is equipped with a fill line whose discharge opening is not over 46 cm (18 inches) from the bottom of the tank.
- 8.5.4** Except as provided under Section 8.5.2, no owner or operator of a bulk gasoline plant, gasoline tank truck or trailer shall permit the loading or unloading of gasoline tank trucks or trailers at a bulk gasoline plant unless each gasoline tank truck or trailer is equipped with a vapor balance system as described under Section 8.5.6 and complies with Section 8.20.3 (Revised October 10, 1990); and
- 8.5.4(a)** equipment is available at the bulk gasoline plant to provide for the submerged filling of each gasoline tank truck or trailer; or
- 8.5.4(b)** each gasoline tank truck or trailer is equipped for bottom filling.
- 8.5.5** No owner or operator of a bulk gasoline plant, gasoline tank truck or trailer shall permit the transfer of gasoline between gasoline tank truck or trailer and stationary storage tank unless:
- 8.5.5(a)** the transfer is conducted in accordance with Sections 8.5.3 and 8.5.4; and
- 8.5.5(b)** the vapor balance system is in good working order and is connected and operating; and
- 8.5.5(c)** the gasoline tank truck or trailer hatches are closed and vapor tight at all times during loading operations; and
- 8.5.5(d)** there are no leaks in the gasoline tank trucks' and trailers' pressure/vacuum relief valves and hatch covers, or the truck tanks or storage tanks, or associated vapor and liquid lines during loading or unloading; and
- 8.5.5(e)** the pressure relief valves on stationary storage vessels and gasoline tank trucks or trailers are set to release at no less than 36 mmHg (0.7 psia) 4.8 kPa or the highest possible pressure (in accordance with state or local fire codes or the National Fire Prevention Association guidelines); and
- 8.5.5(f)** the gasoline tank truck or trailer has a valid Jefferson County Department of Health Air Sticker as required by Section 8.20.4 attached and visibly displayed.
- 8.5.6** Vapor balance system required under Sections 8.5.3 and 8.5.4 shall consist of the following major components:
- 8.5.6(a)** a vapor space connection on the stationary storage tank equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds; and
- 8.5.6(b)** a connecting pipe or hose equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic compounds; and
- 8.5.6(c)** a vapor space connection on the gasoline tank truck or trailer equipped with fittings which are vapor tight and will automatically and immediately close upon disconnection so as to prevent release of organic material.
- 8.5.7** No owner or operator of a bulk gasoline plant shall permit the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.
- 8.5.8** The owner or operator of a bulk gasoline plant subject to this Part shall:
- 8.5.8(a)** maintain records of the annual throughput quantities and types of volatile petroleum liquids stored in each storage tank; and
- 8.5.8(b)** maintain a daily record of all gasoline tank trucks or trailers loaded or unloaded and the Jefferson County Department of Health Air Sticker number of each gasoline tank truck or trailer; and
- 8.5.8(c)** submit to the Health Officer as a minimum, an annual summary report of the records required under Paragraph 8.5.8(a); and

8.5.8(d) copies of all records and reports required under Paragraph 8.5.8(b) shall be available to representatives of the Health Officer upon request and shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made.

8.6 Bulk Gasoline Terminals.

8.6.1 For the purpose of this Part, the following definitions apply:

8.6.1(a) "Bulk Gasoline Terminal" means a gasoline storage facility which receives gasoline from its supply source primarily by pipelines, ships, barges, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by gasoline tank trucks; and has an average daily throughput of more than 75,708 liters (20,000 gallons) of gasoline.

8.6.2 This Part shall apply to bulk gasoline terminals and the appurtenant equipment necessary to load the gasoline tank truck or trailer compartments.

8.6.3 No person shall load gasoline into any gasoline tank truck or trailer from any bulk gasoline terminal unless:

8.6.3(a) the bulk gasoline terminal is equipped with a vapor recovery equipment system capable of complying with Section 8.6.4, properly installed, in good working order, in operation, and consisting of one of the following:

8.6.3(a)(1) an absorber or condensation system which processes and recovers at least ninety percent (90%) by weight of all vapors and gases from the equipment being controlled; or

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

8.6.3(a)(3) a control equipment system demonstrated to have control efficiency equivalent to or greater than Subparagraph 8.6.3(a)(1) or 8.6.3(a)(2) and approved by the Health Officer; and (Revised October 10, 1990).

8.6.3(b) all displaced vapors and gases are vented only to the vapor control system; and

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

8.6.3(d) all loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected; and

8.6.3(e) the gasoline tank truck or trailer has a valid Jefferson County Department of Health Air Sticker as required by Section 8.20.4 attached and visibly displayed.

8.6.4 Sources affected under Paragraph 8.6.3(a) shall not allow mass emissions of VOCs from control equipment to exceed 80 milligrams per liter (4.7 grains per gallon) of gasoline loaded.

8.6.5 Sources affected under Section 8.6.2 shall not:

8.6.5(a) allow the pressure in the vapor collection system to exceed the gasoline tank truck or trailer pressure relief settings; nor

8.6.5(b) allow the disposal of waste gasoline in sewers, open containers or in a manner that would result in evaporation.

8.6.6 The owner or operator of a bulk gasoline terminal subject to this Part shall:

8.6.6(a) maintain records of the annual throughput quantities and types of petroleum liquids stored in each storage tank; and

8.6.6(b) maintain a daily record of all gasoline tank trucks or trailers loaded or unloaded and the Jefferson County Department of Health Air Sticker number of each gasoline tank truck or trailer; and

8.6.6(c) submit to the Health Officer, as a minimum, an annual summary report of the records required under Paragraph 8.6.6(a); and

8.6.6(d) copies of all records and reports required under Paragraph 8.6.6(b) shall be available to representatives of the Health Officer upon request and shall be retained by the owner or operator for a minimum of two (2) years after the date on which the records were made.

8.7 Gasoline Dispensing Facilities - Stage I Control.

8.7.1 For the purpose of this Part, the following definitions apply:

- 8.7.1(a)** "Gasoline Tank Truck" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities.
- 8.7.1(b)** "Gasoline Dispensing Facility" means any outlet where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
- 8.7.1(c)** "Vapor Balance System (Stage I)" means a vapor-tight system that transfers the vapors displaced from the stationary storage tanks to the gasoline tank truck.
- 8.7.1(d)** "Average Monthly Throughput" means the average monthly throughput for the last previous months of June, July and August during full operation.
- 8.7.2** This Part shall apply to all gasoline dispensing facilities except:
- 8.7.2(a)** transfers made to storage tanks or gasoline dispensing facilities equipped with floating roofs or their equivalent; and
- 8.7.2(b)** transfers made to stationary gasoline storage tanks of less than 3,785 liters (1,000 gallons) capacity in place before July 1, 1979 and of less than 946 liters (250 gallons) installed after July 1, 1979; and
- 8.7.2(c)** stationary gasoline storage containers of less than 2,082 liters (550 gallons) capacity used exclusively for the fueling of implements of husbandry, provided the containers are equipped with a submerged fill pipe; and
- 8.7.2(d)** any existing facility with an average monthly throughput of gasoline of less than 4,000-gallons, provided that all gasoline storage tanks that are not exempted under Paragraphs 8.7.2(a), (b), and (c) are equipped with a submerged fill pipe.
- 8.7.3** No owner or operator shall transfer, cause or allow the transfer of gasoline from any gasoline tank truck into any stationary storage tank subject to this Part, unless the tank is equipped with a submerged fill pipe and the vapors displaced from the storage tank during filling are processed by a vapor control system in accordance with Section 8.7.4(a).
- 8.7.4**
- 8.7.4(a)** The vapor control system required by Section 8.7.3 shall include one or more of the following:
- 8.7.4(a)(1)** a vapor balance system (Stage I) between the stationary storage tank and the gasoline tank truck and a system that will ensure the vapor line is connected before gasoline can be transferred into the tank; or
- 8.7.4(a)(2)** a refrigeration condensation system or equivalent designed to recover at least ninety percent (90%) by weight of the organic compounds in displaced vapor; or
- 8.7.4(a)(3)** a control equipment system demonstrated to have control efficiency equivalent to or greater than that provided under Paragraph 8.7.4(a)(2) and approved by the Health Officer. (Revised October 10, 1990).
- 8.7.4(b)** Pressure/vacuum (P/V) vent valves installed on storage tank vent pipes shall meet the following pressure specifications:
- 8.7.4(b)(1)** A positive pressure setting of 2.5 to 6.0 inches of water; and
- 8.7.4(b)(2)** A negative pressure setting of 6.0 to 10.0 inches of water.
- 8.7.5** Each owner or operator of a gasoline dispensing facility subject to this Part shall:
- 8.7.5(a)** not permit the transfer of gasoline between a gasoline tank truck and a stationary storage tank unless the gasoline tank truck complies with Part 8.20 and the vapor control system is connected and operating in accordance with Section 8.7.4; and
- 8.7.5(b)** maintain written records of the monthly throughput quantities in gallons and types of petroleum distillates in all stationary storage tanks; and
- 8.7.5(c)** submit to the Health Officer, as a minimum, an annual summary report of the record required under Paragraph 8.7.5(b);
- 8.7.5(d)** make available to representatives of the Health Officer upon request, copies of all records and reports required under Paragraphs 8.7.5(b) and (c) and retain the records and reports for a minimum of two (2) years after the date on which the documents were made; and

- 8.7.5(e)** facilitate inspection of gasoline dispensing facilities by locating pressure/vacuum (P/V) vents such that they are visible for inspection from the ground and by providing ready access to underground storage tanks during times of inspection, including but not necessarily limited to unlocking gas caps or providing keys to the inspector.
- 8.7.6** No owner or operator of a gasoline dispensing facility subject to this Part shall cause or allow gasoline to be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation of the gasoline to the atmosphere.
- 8.7.7** Regardless of the applicability exemption under Paragraph 8.7.2(d), all gasoline dispensing facilities that are subject to this Part shall not disconnect an existing vapor balance system and shall maintain the system in proper working order in accordance with this Part even if the facility's average monthly throughput of gasoline decreases to less than 4,000 gallons.
- 8.8 Reserved.**
- 8.9 Reserved.**
- 8.10 Reserved.**
- 8.11 Surface Coating.**
- 8.11.1** Can Coating.
- 8.11.1(a)** For the purpose of this Section, the following definitions apply:
- 8.11.1(a)(1)** "End Sealing Compound" means a synthetic rubber compound which is coated onto can ends and which functions as a gasket when the end is assembled on the can.
- 8.11.1(a)(2)** "Exterior Base Coating" means a coating applied to the exterior of a can to provide exterior protection to the metal and to provide background for the lithographic or printing operation.
- 8.11.1(a)(3)** "Interior Base Coating" means a coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product.
- 8.11.1(a)(4)** "Interior Body Spray" means a coating sprayed on the interior of the can to provide a protective film between the product and the can.
- 8.11.1(a)(5)** "Overvarnish" means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss, and to protect the finish against abrasion and corrosion.
- 8.11.1(a)(6)** "Three-piece Can Side-seam Spray" means a coating sprayed on the exterior and interior of a welded, cemented, or soldered seam to protect the exposed metal.
- 8.11.1(a)(7)** "Two-piece Can Exterior End Coating" means a coating applied by roller coating or spraying to the exterior of a can to provide protection to the metal.
- 8.11.1(b)** This Section shall apply to coating applicator(s), flashoff area(s) and oven(s) of sheet, can, or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish; two-piece can exterior (basecoat and overvarnish); two-piece and three-piece can interior body spray; two-piece can exterior (spray or roll coat); three-piece can side-seam spray, and end sealing compound operations.
- 8.11.1(c)** No owner or operator of a can coating line subject to this Section shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of:
- 8.11.1(c)(1)** 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from sheet basecoat (exterior and interior) and overvarnish or two-piece can exterior (basecoat and overvarnish) operations.
- 8.11.1(c)(2)** 0.51 kilograms per liter of coating (4.2 pounds per gallon), excluding water, delivered to the coating applicator from the two-piece and three-piece can interior body spray and two-piece can exterior end (spray or roll coat) operations.
- 8.11.1(c)(3)** 0.66 kilograms per liter of coating (5.5 pounds per gallon) excluding water, delivered to the coating applicator from three-piece can side seam spray operations.

8.11.1(c)(4) 0.44 kilograms per liter of coating (3.7 pounds per gallon), excluding water, delivered to the coating applicator from end sealing compound operations.

8.11.2 Coil Coating.

8.11.2(a) For the purpose of this Section, the following definitions apply:

8.11.2(a)(1) "Coil Coating" means the coating of any flat metal sheet or strip that comes in rolls or coils.

8.11.2(a)(2) "Quench Area" means a chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

8.11.2(b) This Section shall apply to the coating applicator(s), oven(s), and quench area(s) of coil coating lines involved in prime and topcoat or single coat operations.

8.11.2(c) No owner or operator of a coil coating line subject to this Section shall cause, allow, or permit the discharge into the atmosphere of VOC's in excess of 0.31 kilograms per liter of coating (2.6 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

8.11.3 Metal Furniture Coating.

8.11.3(a) For the purpose of this Section, the following definitions apply:

8.11.3(a)(1) "Application Area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

8.11.3(a)(2) "Metal Furniture Coating" means the surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

8.11.3(b) This Section shall apply to the application area(s), flashoff area(s), and oven(s) of metal furniture coating lines involved in prime and topcoat or single coating operations.

8.11.3(c) No owner or operator of a metal furniture coating line subject to this Section shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.36 kilograms per liter of coating (3.0 pounds per gallon), excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

8.11.4 Surface Coating of Large Appliance.

8.11.4(a) For the purpose of this Section, the following definitions apply:

8.11.4(a)(1) "Application Area" means the area where the coating is applied by spraying, dipping, or flowcoating techniques.

8.11.4(a)(2) "Single Coat" means a single film of coating applied directly to the metal substrate omitting the primer application.

8.11.4(a)(3) "Large Appliances" means doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

8.11.4(b) This Section shall apply to application area(s), flashoff area(s), and oven(s) of large appliance coating lines involved in prime, single, or topcoat coating operations.

8.11.4(c) This Section shall not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed 757 liters (200 gallons) in any one year.

8.11.4(d) No owner or operator of a large appliance coating line subject to this Section shall cause, allow, or permit the discharge into the atmosphere of any VOCs in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from prime, single, or topcoat coating operations.

8.11.5 Reserved.

8.11.6 Paper Coating.

8.11.6(a) For the purpose of this Section, the following definitions apply:

8.11.6(a)(1) "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

- 8.11.6(a)(2)** "Paper Coating" means coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition. Paper coating includes, but is not limited to, application by impregnation or saturation or by the use of roll, knife, or rotogravure coating. (Revised May 8, 1991).
- 8.11.6(a)(3)** "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.
- 8.11.6(a)(4)** "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.
- 8.11.6(b)** This Section shall apply to roll, knife, or rotogravure coater(s), flashoff areas, and drying ovens of paper coating lines. This Section shall also apply to other application and drying systems of paper coating lines. (Revised November 14, 1990; May 8, 1991).
- 8.11.6(c)** No owner or operator of a paper coating line subject to this Section shall cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a paper coating line.
- 8.11.7** Fabric and Vinyl Coating.
- 8.11.7(a)** For the purpose of this Section, the following definitions apply:
- 8.11.7(a)(1)** "Fabric Coating" means the coating of a textile substrate with a knife, roll, or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance. Fabric coating includes, but is not limited to, application by impregnation or saturation or by the use of roll, knife, or rotogravure coating. (Revised May 8, 1991).
- 8.11.7(a)(2)** "Knife Coating" means the application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.
- 8.11.7(a)(3)** "Roll Coating" means the application of a coating material to a substrate by means of hard rubber or steel rolls.
- 8.11.7(a)(4)** "Rotogravure Coating" means the application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.
- 8.11.7(a)(5)** "Vinyl Coating" means to apply a decorative or protective or functional topcoat or printing on vinyl coated fabric or vinyl sheets. Vinyl plastisol shall not be considered a vinyl coating when it is applied to a fabric to form the substrate that is subsequently coated. (Revised October 10, 1990).
- 8.11.7(b)** This Section shall apply to roll, knife, or rotogravure coater(s), flashoff areas, and drying ovens of fabric and vinyl coating lines. This Section shall also apply to other application and drying systems of fabric and vinyl coating lines. (Revised November 14, 1990; May 8, 1991).
- 8.11.7(c)** No owner or operator of a fabric coating line or a vinyl coating line subject to this Section shall cause, allow, or permit discharge into the atmosphere of any volatile organic compounds in excess of:
- 8.11.7(c)(1)** 0.35 kilograms per liter of coating (2.9 pounds per gallon), excluding water, delivered to the coating applicator from a fabric coating line.
- 8.11.7(c)(2)** 0.45 kilograms per liter of coating (3.8 pounds per gallon), excluding water, delivered to the coating applicator from a vinyl coating line.
- 8.11.8** Magnet Wire Coating.
- 8.11.8(a)** For the purpose of this Section, the following definition applies:
- "Magnet Wire Coating" means the process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.
- 8.11.8(b)** This section shall apply to oven(s) of magnet wire coating operations.
- 8.11.8(c)** No owner or operator of a magnet wire coating oven subject to this section shall cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.20 kilograms per liter of coating (1.7 pounds per gallon), excluding water, delivered to the coating applicator from magnet wire coating operations.

8.11.9 Compliance Methods.

8.11.9(a) The emission limits under this Part may be achieved by:

8.11.9(a)(1) The application of low solvent content coating technology; or

8.11.9(a)(2) The installation and operation of a VOC capture system and a VOC control device system, provided that each day the overall VOC emission reduction efficiency needed to demonstrate compliance with the applicable emission rate restriction is achieved; or (Revised September 11, 1991).

8.11.9(a)(3) The application of powder coating technology; or (Revised September 11, 1991).

8.11.9(a)(4) The Health Officer may allow a coating line that has no add-on VOC control equipment to average two or more coatings under all the following conditions: (Adopted October 10, 1990).

8.11.9(a)(4)(i) the surface coatings shall be for the same type of operation (source category) and shall be subject to the same regulated emission rate restriction; and

8.11.9(a)(4)(ii) the surface coatings shall be delivered to the application system on the same coating line; and

8.11.9(a)(4)(iii) the surface coatings shall be averaged on the basis of pounds of VOC emitted per gallon of coating solids applied to the substrate; and

8.11.9(a)(4)(iv) the compliance demonstration time frame shall be a twenty-four (24) hour period (calendar day); and

8.11.9(a)(4)(v) the VOC emissions shall be equal to or less than those emitted when all the surface coatings delivered to the application system comply with the applicable regulated VOC emission rate restriction.

8.11.10 Flatwood Paneling.

8.11.10(a) For the purpose of this Section, the following definitions apply:

8.11.10(a)(1) "Class II hardboard paneling finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

8.11.10(a)(2) "Hardboard" means a panel manufactured primarily from inter-felted lino-cellulosic fibers which are consolidated under heat and pressure in a hot press.

8.11.10(a)(3) "Hardwood plywood" means plywood whose surface layer is a veneer of hardwood.

8.11.10(a)(4) "Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

8.11.10(a)(5) "Thin particle board" is a manufactured board 1/4 inch or less in thickness made of individual wood particles which have been coated with a binder and formed into flat sheets by pressure.

8.11.10(a)(6) "Printed interior panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

8.11.10(a)(7) "Tileboard" means paneling that has a colored waterproof surface coating.

8.11.10(a)(8) "Coating application system" means all operations and equipment which apply, convey, and dry a surface coating, including, but not limited to, spray booths, flow coaters, conveyors, flashoff areas, air dryers, and ovens.

8.11.10(b) This section shall apply to all flatwood manufacturing facilities that manufacture the following products.

8.11.10(b)(1) printed interior panels made of hardwood plywood, and thin particle board:

8.11.10(b)(2) natural finish hardwood plywood panels; or

8.11.10(b)(3) hardboard paneling with Class II finishes.

8.11.10(c) This Section shall not apply to the manufacture of exterior siding, tileboard, or particle board used as a furniture component.

8.11.10(d) No owner or operator of a flatwood manufacturing facility subject to this Section shall emit VOCs from a coating application system in excess of:

- 8.11.10(d)(1)** 2.9 kilograms per 100 square meters of coated finished product (6.0 pounds per 1,000 square feet) from printed interior panels, regardless of the number of coats applied:
- 8.11.10(d)(2)** 5.8 kilograms per 100 square meters of coated finished product (12.0 pounds per 1,000 square feet) from natural finish hardwood plywood panels, regardless of the number of coats applied; and
- 8.11.10(d)(3)** 4.8 kilograms per 100 square meters of coated finished product (10.0 pounds per 1,000 square feet) from Class II finishes on hardboard panels, regardless of the number of coats applied.
- 8.11.11** Miscellaneous Metal Parts and Products.
- 8.11.11(a)** For the purpose of this Section, the following definitions apply:
- 8.11.11(a)(1)** "Air dried coating" means coatings which are dried by the use of air or forced warm air at temperatures up to 90°C (194°F).
- 8.11.11(a)(2)** "Clear coat" means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflective base or undertone color and any coating used as an interior protective lining on any cylindrical metal shipping container of greater than one gallon capacity.
- 8.11.11(a)(3)** "Coating application system" means all operations and equipment which applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flashoff areas, air dryers and ovens.
- 8.11.11(a)(4)** "Extreme environmental conditions" means exposure to any one of the following: the weather all of the time; temperatures consistently above 95°C (203°F), detergents, abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.
- 8.11.11(a)(5)** "Extreme performance coatings" means coatings designed for harsh exposure or extreme environmental conditions.
- 8.11.11(a)(6)** "Heat sensitive material" means materials which cannot consistently be exposed to temperatures greater than 95°C (203°F).
- 8.11.11(a)(7)** "Low solvent coating" means materials which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include waterborne, higher solids, electrodeposition and powder coatings.
- 8.11.11(a)(8)** "Powder Coating" means any surface coating which is applied as a dry powder and is fused into a continuous coating film through the use of heat.
- 8.11.11(a)(9)** "Single coat" means one film of coating applied to a metal surface.
- 8.11.11(b)** This Section shall apply to coating of miscellaneous metal parts and products in the following industries:
- 8.11.11(b)(1)** Large farm machinery (harvesting, fertilizing and planting machines, tractors, combines, etc.); (Revised October 10, 1990).
- 8.11.11(b)(2)** Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.);
- 8.11.11(b)(3)** Small appliances (fans, mixers, blenders, crock pots, dehumidifiers, vacuum cleaners, etc.);
- 8.11.11(b)(4)** Commercial machinery (office equipment, computers and auxiliary equipment, typewriters, calculators, vending machines, etc.);
- 8.11.11(b)(5)** Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);
- 8.11.11(b)(6)** Fabricated metal products (metal covered doors, frames, etc.); and
- 8.11.11(b)(7)** Any other industrial category which coats metal parts of products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), Major Group 39 (miscellaneous manufacturing industries). Major Group 40 (railroad transportation), and Major Group 41 (transit passenger transportation).
- 8.11.11(c)** This Section shall not apply to the surface coating of the following metal parts and products:
- 8.11.11(c)(1)** automobiles and light-duty trucks;

- 8.11.11(c)(2)** metal cans;
- 8.11.11(c)(3)** flat metal sheets and strips in the form of rolls or coils;
- 8.11.11(c)(4)** magnet wire for use in electrical machinery;
- 8.11.11(c)(5)** metal furniture;
- 8.11.11(c)(6)** large appliances;
- 8.11.11(c)(7)** exterior of airplanes;
- 8.11.11(c)(8)** automobile refinishing;
- 8.11.11(c)(9)** customized coating of automobiles and trucks, if production is less than 35 vehicles per day and if the VOC emission rate from the customized coating operation does not exceed 60 tons per year based on an annual rolling average calculated at the end of each calendar month;
- 8.11.11(c)(10)** exterior of marine vessels; and
- 8.11.11(c)(11)** fabricated metal parts and products under the major Standard Industrial Classification Code of Group No. 34 if the VOC emissions rate is less than a potential ten tons per calendar year (10 TPY) before an add-on VOC control device.
- 8.11.11(d)** This Section shall apply to the application area(s), flashoff area(s), air and forced air dryer(s) and oven(s) used in the surface coating of the metal parts and products in Paragraph 8.11.11(b). This Section also applies to prime coat, topcoat, and single coat operations.
- 8.11.11(e)** No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products shall operate a coating application system subject to this Section that emits VOCs in excess of:
 - 8.11.11(e)(1)** 0.52 kilograms per liter (4.3 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings;
 - 8.11.11(e)(2)** 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 90°C (194°F);
 - 8.11.11(e)(3)** 0.42 kilograms per liter (3.5 pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; and
 - 8.11.11(e)(4)** 0.36 kilograms per liter (3.0 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems, excluding powder coating systems; and
 - 8.11.11(e)(5)** 0.05 kilograms per liter (0.4 pounds per gallon) of coating, excluding water, delivered to a coating applicator for all powder coating systems.
- 8.11.11(f)** If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:
 - 8.11.11(f)(1)** exhaust gas temperature of all incinerators;
 - 8.11.11(f)(2)** temperature rise across a catalytic incinerator bed;
 - 8.11.11(f)(3)** breakthrough of VOC on a carbon adsorption unit; and
 - 8.11.11(f)(4)** any other continuous monitoring or recording device required by the Health Officer.
- 8.11.12** Recordkeeping.
 - 8.11.12(a)** The owner or operator of a coating line subject to the requirements in Part 8.11 shall maintain as a minimum the following daily records to demonstrate compliance in the time frame required by any regulation under this Part or Air Permit condition:
 - 8.11.12(a)(1)** the quantity in gallons of all surface coatings delivered to the application system; and
 - 8.11.12(a)(2)** the quantity in gallons of all organic liquid diluents (coating thinners and additives) added to the surface coatings; and

- 8.11.12(a)(3)** the quantity in gallons of all organic liquid solvents used for wash or cleanup; and
- 8.11.12(a)(4)** the quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and
- 8.11.12(a)(5)** the date of each application of surface coatings and diluents and usage of wash and cleanup solvents; and
- 8.11.12(a)(6)** the regulation(s) applicable to the coating line for which the records are being maintained; and
- 8.11.12(a)(7)** the daily records shall be kept in the units necessary to verify compliance with the applicable regulations (i. e. pounds of VOC per gallon of coating delivered to the application system, excluding water and exempt VOC); and
- 8.11.12(a)(8)** the application method and the substrate material type; and
- 8.11.12(a)(9)** where applicable, the surface coating curing and/or drying oven temperature(s) in degrees Fahrenheit; and
- 8.11.12(a)(10)** where applicable, the continuous combustion temperature in degrees Fahrenheit of a thermal incinerator control system; and
- 8.11.12(a)(11)** where applicable, the temperature rise across the catalyst bed and exhaust temperature in degrees Fahrenheit of a catalytic incinerator control system; and
- 8.11.12(a)(12)** where applicable, the inlet and outlet temperature in degrees Fahrenheit of the cooling medium of a condenser control system; and
- 8.11.12(a)(13)** the following information on all surface coatings and organic liquid solvents (diluents, additives, wash and cleanup):
 - 8.11.12(a)(13)(i)** manufacturer (supplier); and
 - 8.11.12(a)(13)(ii)** product name and manufacturer's code number; and
 - 8.11.12(a)(13)(iii)** density (pounds per gallon); and
 - 8.11.12(a)(13)(iv)** VOC content in percent weight and volume; and
 - 8.11.12(a)(13)(v)** solids content in percent weight and volume; and
 - 8.11.12(a)(13)(vi)** water content in percent weight and volume; and
 - 8.11.12(a)(13)(vii)** exempt VOC content in percent weight and volume; and
 - 8.11.12(a)(13)(viii)** pounds of VOC per gallon of coating delivered to the application system, excluding water and exempt VOC.
- 8.11.12(b)** The compliance demonstration time frame for an individual coating line that applies coatings that are subject to the same regulated VOC emission rate under Part 8.11 shall be a twenty-four (24) hour period (calendar day).
- 8.11.12(c)** The daily records required under Paragraph 8.11.12(a) shall be retained by the owner or operator at the location of the regulated source for a minimum of two years after the date of record and shall be available to representatives of the Health Officer upon request.
- 8.11.12(d)** The recordkeeping provisions of Paragraph 8.11.12(a) shall not apply if the Health Officer determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

8.12 Solvent Metal Cleaning.

8.12.1 For the purpose of this Part, the following definitions apply:

- 8.12.1(a)** "Cold Cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.
- 8.12.1(b)** "Conveyorized Degreasing" means the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.

- 8.12.1(c)** "Freeboard Height" means for cold cleaner, the distance from the liquid solvent level or solvent drain in the degreaser tank to the lip of the tank. For vapor degreasers it is the distance from the solvent vapor-air interface in the tank to the lip of the tank.
- 8.12.1(d)** "Freeboard Ratio" means the freeboard height divided by the width of the degreaser.
- 8.12.1(e)** "Open Top Vapor Degreasing" means the batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the cold metal parts.
- 8.12.1(f)** "Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyORIZED degreasing.
- 8.12.2** This Part shall apply to cold cleaning, open top vapor degreasing, and conveyORIZED degreasing operations.
- 8.12.3** The provisions of this Part shall apply with the following exceptions:
- 8.12.3(a)** Open top vapor degreasers with an open area smaller than one (1) square meter (10.8 square feet) shall be exempt from Subparagraphs 8.12.5(c)(2) and (4).
- 8.12.3(b)** ConveyORIZED degreasers with an air/vapor interface smaller than 2.0 square meters (21.6 square feet) shall be exempt from Subparagraph 8.12.6(b).
- 8.12.4** Except as provided under Section 8.12.3, the owner or operator of a cold cleaning device shall:
- 8.12.4(a)** equip the cleaner with a cover and the cover shall be so designed that it can be easily operated with one hand; if,
- 8.12.4(a)(1)** the solvent volatility is greater than 15 mmHg (0.3 psia) measured at 38°C (100°F); or
- 8.12.4(a)(2)** the solvent is agitated; or
- 8.12.4(a)(3)** the solvent is heated; and,
- 8.12.4(b)** equip the cleaner with a device for draining cleaned parts and if the solvent volatility is greater than 32 mmHg(0.6 psia) measured at 38°C (100°F), construct the drainage device internally so that the parts are enclosed under the cover while draining, except that the drainage device may be external for applications where an internal type cannot fit into the cleaning system; and
- 8.12.4(c)** if the solvent volatility is greater than 32 mmHg (0.6 psia) measured at 38°C (100°F) or if the solvent is heated above 50°C (120°F) install one of the following devices:
- 8.12.4(c)(1)** freeboard that gives a freeboard ratio greater than or equal to 0.7; or
- 8.12.4(c)(2)** water cover (solvent must be insoluble in and heavier than water); or
- 8.12.4(c)(3)** other equipment systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the Health Officer; and
- 8.12.4(d)** provide a permanent, conspicuous label, summarizing the operating requirements; and
- 8.12.4(e)** close the cover whenever parts are not being handled in the cleaner; and
- 8.12.4(f)** drain the cleaned parts for at least 15 seconds or until dripping ceases; and
- 8.12.4(g)** if used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure which does not cause excessive splashing; and
- 8.12.4(h)** store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere.
- 8.12.5** Except as provided under Section 8.12.3 the owner or operator of an open top vapor degreaser shall:
- 8.12.5(a)** equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone; and
- 8.12.5(b)** provide the following safety switches:
- 8.12.5(b)(1)** a condenser flow switch and thermostat which shuts off the heat if the condenser coolant is either not circulating or too warm; and

- 8.12.5(b)(2)** a spray safety switch which shuts off the spray pump if the vapor level drops more than 10 centimeters (4 inches) below the bottom of the condenser coil; and
- 8.12.5(b)(3)** a vapor level control thermostat which shuts off the heat when the level rises too high.
- 8.12.5(c)** install one of the following control devices:
 - 8.12.5(c)(1)** a freeboard ratio of greater than or equal to 0.75, and a powered or mechanically assisted cover if the degreaser opening is greater than 1 square meter (10.8 square feet); or
 - 8.12.5(c)(2)** refrigerated chiller; or
 - 8.12.5(c)(3)** enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser); or
 - 8.12.5(c)(4)** carbon adsorption system, with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (when cover is open), and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle; or
 - 8.12.5(c)(5)** a control equipment system, demonstrated to have control efficiency equivalent to or greater than any of the above, and approved by the Health Officer; and
- 8.12.5(d)** keep the cover closed at all times except when processing workloads through the degreaser; and
- 8.12.5(e)** minimize solvent carryout by:
 - 8.12.5(e)(1)** racking parts to allow complete drainage; and
 - 8.12.5(e)(2)** moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute); and
 - 8.12.5(e)(3)** holding the parts in the vapor/zone at least 30 seconds or until condensation ceases; and
 - 8.12.5(e)(4)** tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and
 - 8.12.5(e)(5)** allowing parts to dry within the degreaser for at least 15 seconds or until visually dry; and
- 8.12.5(f)** not degrease porous or absorbent materials, such as cloth, leather, wood or rope; and
- 8.12.5(g)** not occupy more than half of the degreaser's open top area with a workload; and
- 8.12.5(h)** not load the degreaser to the point where the vapor level would drop more than 10 centimeters (4 inches) below the bottom of the condenser coil when the workload is lowered into the vapor zone; and
- 8.12.5(i)** always spray below the vapor level; and
- 8.12.5(j)** repair solvent leaks immediately, or shutdown the degreaser; and
- 8.12.5(k)** store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere; and
- 8.12.5(l)** not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and
- 8.12.5(m)** not use ventilation fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per square meter (65 cubic feet per minute per square foot) of degreaser open area, unless necessary to meet OSHA requirements; and
- 8.12.5(n)** provide a permanent, conspicuous label, summarizing the operating requirements.
- 8.12.6** Except as provided under Section 8.12.3, the owner or operator of a conveyORIZED degreaser shall:
 - 8.12.6(a)** not use workplace fans near the degreaser opening nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser opening, unless necessary to meet OSHA requirements; and
 - 8.12.6(b)** install one of the following control devices:
 - 8.12.6(b)(1)** refrigerated chiller; or

- 8.12.6(b)(2)** carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (when downtime covers are open), and exhausting less than 25 parts per million of solvent by volume averaged over a complete adsorption cycle; or
- 8.12.6(b)(3)** a control equipment system demonstrated to have a control efficiency equivalent to or greater than subparagraph 8.12.6(b)(1) or 8.12.6(b)(2) and approved by the Health Officer; and (Revised October 10, 1990).
- 8.12.6(c)** equip the cleaner with equipment, such as drying tunnel or rotating (tumbling) basket sufficient to prevent cleaned parts from carrying out solvent liquid or vapor; and
- 8.12.6(d)** provide the following safety switches:
 - 8.12.6(d)(1)** a condenser flow switch and thermostat which shut off the heat if the condenser is either not circulating or too warm; and
 - 8.12.6(d)(2)** a spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 10 centimeters (4 inches) below the bottom of the condenser; and
 - 8.12.6(d)(3)** a vapor level control thermostat which shuts off the heat when the level rises too high; and
- 8.12.6(e)** minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than ten centimeters (4 inches) or less than 10 percent of the width of the opening; and
- 8.12.6(f)** provide downtime covers for closing off the entrance and exit during the shutdown hours; and
- 8.12.6(g)** minimize carryout emissions by:
 - 8.12.6(g)(1)** racking parts for best drainage; and
 - 8.12.6(g)(2)** maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute); and
- 8.12.6(h)** store waste solvent only in covered containers; and
- 8.12.6(i)** repair solvent leaks immediately, or shut down the degreasers; and
- 8.12.6(j)** not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator; and
- 8.12.6(k)** place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhaust are shut down and not remove them until just before start-up.

8.13 Cutback and Emulsified Asphalt.

(Revised October 10, 1990).

8.13.1 For the purpose of this Part, the following definitions apply:

- 8.13.1(a)** "Asphalt" means a dark brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.
- 8.13.1(b)** "Cutback Asphalt" means asphalt cement which has been liquefied by blending with petroleum solvents (dilutents). Upon exposure to atmospheric conditions, the dilutents evaporate, leaving the asphalt cement to perform its function.
- 8.13.1(c)** "Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt layer.
- 8.13.1(d)** "Emulsified Asphalt" means asphalt cement which has been liquefied by blending it with water and an emulsifying agent. Upon exposure to atmospheric conditions, the water and emulsifying agent evaporate, leaving the asphalt cement to perform its function. (Adopted October 10, 1990).
- 8.13.1(e)** "ASTM" is an acronym for American Society for Testing and Materials. This organization publishes reference test methods. (Adopted October 10, (1990).

- 8.13.2** This Part shall apply to the manufacture and use of cutback and emulsified asphalts in highway paving and maintenance operations in Jefferson County. (Revised October 10, 1990).
- 8.13.3** No person may cause, allow, or permit the sale or offering for sale, mixing, storage, use or application of cutback asphalts except where: (Revised October 10, 1990).
- 8.13.3(a)** Long-time stockpile storage is necessary; or
- 8.13.3(b)** The use or application commences in December of any year and such use or application is completed by the end of February of the following year; or
- 8.13.3(c)** The cutback asphalt is to be used solely as a penetrating prime coat.
- 8.13.4** The mixing, storage, use or application of emulsified asphalt in highway and maintenance operations in Jefferson County shall be allowed at all times if the maximum oil distillate (organic solvent) content in the emulsified asphalt does not exceed seven percent (7%) as determined by ASTM distillation test method D-244. If the maximum oil distillate in the emulsified asphalt exceeds seven percent (7%), the mixing, storage, use or application of said asphalt is limited to January, February and December. (Adopted October 10, 1990).
- 8.13.5** Recordkeeping Requirements. (Adopted October 10, 1990).
- 8.13.5(a)** The manufacturer of cutback or emulsified asphalt shall maintain a current record in a format approved by the Health Officer of each batch of cutback or emulsified asphalt produced. The record shall contain the following information as a minimum:
- 8.13.5(a)(1)** The calendar date that the batch was produced; and,
- 8.13.5(a)(2)** The quantity in tons produced; and,
- 8.13.5(a)(3)** The customer's name and address to where the cutback or emulsified asphalt was sent; and,
- 8.13.5(a)(4)** For emulsified asphalt only, the oil distillate organic solvent content as determined by ASTM distillation test method D-244. The Health Officer may accept, instead of ASTM test method D-244, a certification by the emulsified asphalt manufacturer of the composition of the batch if supported by actual batch formulation records.
- 8.13.5(b)** The record required in Paragraph 8.13.5(a) shall be maintained on file for a minimum of two years after the date of record and shall be made available to the Health Officer upon request.
- 8.13.5(c)** The recordkeeping provisions of Section 8.13.5 shall not apply if the Health Officer determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

8.14 Petition for Alternative Control Strategies.

(Revised October 10, 1990).

- 8.14.1** Notwithstanding any requirements under Chapter 8, an owner or operator of a VOC source may petition the Health Officer for a source-specific State Implementation Plan (SIP) revision on a case-by-case basis to establish an alternative control strategy not specifically allowed under Chapter 8. Alternative control strategies include the establishment of a source-specific reasonably available control technology, a change in operational procedures, new and innovative control techniques, and crossline averaging of one or more point sources within a facility (plantwide bubble). (Revised October 10, 1990).
- 8.14.2** The methods and procedures of petitioning for a source-specific SIP revision shall be in accordance with all requirements of the Federal Act, Code of Federal Regulations, U. S. Environmental Protection Agency (EPA) policies, Alabama Department of Environmental Management Air Regulations and the Jefferson County Board of Health Air Pollution Control Rules and Regulations. Any questions regarding the methods and procedures of petitioning shall be directed to the Jefferson County Department of Health Air Pollution Control Program. (Revised October 10, 1990).
- 8.14.3** The petition package for a source-specific SIP revision shall be obtained from the Jefferson County Department of Health Air Pollution Control Program. (Revised October 10, 1990).

8.14.4 Only completed petitions containing all the necessary documentation to evaluate the source-specific SIP revision will be processed by the Jefferson County Department of Health Air Pollution Control Program to be considered by the Health Officer. No petition will become effective prior to its approval by EPA as a source-specific SIP revision. (Adopted October 10, 1990).

8.14.5 Any VOC source which submitted a completed application package to the Health Officer prior to November 9, 1987 for a crossline averaging strategy shall not be required to petition for an EPA approved source-specific SIP revision. The affected source(s) shall operate under the provisions of their respective Air Permit Conditions. (Adopted October 10, 1990).

8.15 Compliance Schedules.

8.15.1 Process and Emission Control Equipment Installations.

8.15.1(a) Except as provided under Section 8.15.4 or 8.15.5, the owner or operator of a VOC emission source proposing to install and operate VOC emission control equipment and/or replacement process equipment to comply with Chapter 8 shall adhere to the increments of progress contained in the following schedule:

8.15.1(a)(1) Final plans for the emission control system and/or process equipment shall be submitted within three (3) months of Jefferson County Board of Health promulgation;

8.15.1(a)(2) Contracts for the emission control system and/or process equipment shall be awarded or orders must be issued for purchase of component parts to accomplish emission control within six (6) months of Jefferson County Board of Health promulgation;

8.15.1(a)(3) Initiation of on-site construction or installation of the emission control and/or process equipment shall begin within nine (9) months of Jefferson County Board of Health promulgation;

8.15.1(a)(4) On-site construction or installation of the emission control and/or process equipment shall be completed within fifteen (15) months of Jefferson County Board of Health promulgation;

8.15.1(a)(5) Final compliance shall be achieved within sixteen (16) months of Jefferson County Board of Health promulgation.

8.15.1(b) Any owner or operator of an emission source subject to the compliance schedule of this Section shall certify to the Health Officer within 5 days after the deadline for each increment of progress, whether the required increment of progress has been met.

8.15.2 Low Solvent Content Coating.

8.15.2(a) Except as provided under Section 8.15.4 or 8.15.5 or under Paragraph 8.15.2(b) the owner or operator of a VOC source proposing to employ low solvent content coating technology to comply with Chapter 8 shall adhere to the increments of progress contained in the following schedules:

8.15.2(a)(1) Final plans for the application of low solvent content coating technology shall be submitted within (3) months of Jefferson County Board of Health promulgation;

8.15.2(a)(2) Research and development of low solvent content coating shall be completed within six (6) months of Jefferson County Board of Health promulgation;

8.15.2(a)(3) Evaluation of product quality and commercial acceptance shall be completed within one (1) year of Jefferson County Board of Health promulgation. A determination of product unacceptability will trigger orders for add-on control equipment.

8.15.2(a)(4) Purchase orders shall be issued for low solvent coatings and process modifications within fifteen (15) months of Jefferson County Board of Health promulgation. Purchase orders for add-on controls necessitated under Subparagraph 8.15.2(a)(3) shall be issued within twelve (12) months of Jefferson County Board of Health promulgation.

8.15.2(a)(5) Initiation of process modification for low solvent coating application shall begin within seventeen (17) months of Jefferson County Board of Health promulgation. Initiation of construction or installation of add-on controls necessitated under Subparagraph 8.15.2 (a)(3) shall begin within fifteen (15) months of Jefferson County Board of Health promulgation.

8.15.2(a)(6) Process modifications for low solvent coating application shall be completed and use of low solvent coatings shall begin within twenty-two (22) months of Jefferson County Board of Health promulgation. On-site construction or

installation of add-on controls necessitated under Subparagraph 8.15.2(a)(3) shall be completed within twenty-two (22) months of Jefferson County Board of Health promulgation.

- 8.15.2(a)(7)** Final compliance shall be achieved within two (2) years of Jefferson County Board of Health promulgation. In no case, shall final compliance be allowed beyond December 31, 1987.
- 8.15.2(b)** Where the Health Officer determines that low solvent content coating technology has been sufficiently researched and developed for a particular application, the owner or operator of a VOC emission source proposing to comply with Chapter 8 through application of low solvent content coatings shall adhere to the increments of progress contained in the following schedule:
 - 8.15.2(b)(1)** Final plans for the application of low solvent content coating technology shall be submitted within three (3) months of Jefferson County Board of Health promulgation;
 - 8.15.2(b)(2)** Evaluation of product quality and commercial acceptance shall be completed within six (6) months of Jefferson County Board of Health promulgation;
 - 8.15.2(b)(3)** Purchase orders shall be issued for low solvent content coatings and process modifications within nine (9) months of Jefferson County Board of Health promulgation;
 - 8.15.2(b)(4)** Initiation of process modifications shall begin within eleven (11) months of Jefferson County Board of Health promulgation;
 - 8.15.2(b)(5)** Process modifications shall be completed and use of low solvent content coatings shall begin within fifteen (15) months of Jefferson County Board of Health promulgation;
 - 8.15.2(b)(6)** Final compliance shall be achieved within sixteen (16) months of Jefferson County Board of Health promulgation.
- 8.15.2(c)** Any owner or operator of a stationary source subject to the compliance schedule of this section shall certify to the Health Officer within 5 days after the deadline for each increment of progress, whether the required increment of progress has been met.

8.15.3 Equipment Modification.

- 8.15.3(a)** Except as provided under Section 8.15.4 or 8.15.5, the operator or owner of a VOC emission source proposing to comply with Chapter 8 by modification of existing processing equipment shall adhere to the increment of progress contained in the following schedule:
 - 8.15.3(a)(1)** Final plans for process modification shall be submitted within three (3) months of Jefferson County Board of Health promulgation;
 - 8.15.3(a)(2)** Contracts for process modifications shall be awarded or orders shall be issued for the purchase of components or parts to accomplish process modifications within five (5) months of Jefferson County Board of Health promulgation;
 - 8.15.3(a)(3)** Initiation of on-site construction or installation of process modifications shall begin within seven (7) months of Jefferson County Board of Health promulgation;
 - 8.15.3(a)(4)** On-site construction or installation of process modifications shall be completed within ten (10) months of Jefferson County Board of Health promulgation;
 - 8.15.3(a)(5)** Final compliance shall be achieved within eleven (11) months of Jefferson County Board of Health promulgation.
- 8.15.3(b)** Any owner or operator of an emission source subject to the compliance schedule of this Section shall certify to the Health Officer within 5 days after the deadline for each increment of progress, whether the required increment of progress has been met.

8.15.4 Alternative Compliance Schedules.

- 8.15.4(a)** Nothing in this Part shall prevent the Health Officer from approving a separate schedule for any source, if he finds that the application of a compliance schedule in Sections 8.15.1 through 8.15.3 would be infeasible or impracticable.
- 8.15.4(b)** Nothing in this part shall prevent the owner or operator of a VOC source from submitting to the Health Officer a proposed alternative compliance schedule provided:

- 8.15.4(b)(1)** the proposed alternative compliance schedule is submitted within three (3) months of Jefferson County Board of Health promulgation; and
- 8.15.4(b)(2)** the final control plans for achieving compliance with Chapter 8 are submitted simultaneously; and
- 8.15.4(b)(3)** the alternative compliance schedule contains the same increments of progress as the schedule for which it is proposed; and
- 8.15.4(b)(4)** sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators are submitted by the owner or operator of the VOC source to justify the dates proposed for the increments of progress.
- 8.15.4(c)** All alternative compliance schedules proposed or promulgated under this Section shall provide for compliance of the VOC emission source with Chapter 8 as expeditiously as practicable, but not later than three (3) years beyond promulgation by the Jefferson County Board of Health. (Revised October 10, 1990).
- 8.15.4(d)** Any compliance schedule approved under this Section may be revoked at any time if the source does not meet the increments of progress stipulated.
- 8.15.4(e)** Any owner or operator of an emission source subject to the compliance schedule of this Section shall certify to the Health Officer within 5 days after the deadline for each increment of progress, whether the required increment of progress has been met.
- 8.15.5** Exception. Sections 8.15.1 through 8.15.4 shall not apply to sources which are in compliance with Chapter 8 prior to the date of Jefferson County Board of Health promulgation of Chapter 8 and have determined and certified compliance to the satisfaction of the Health Officer within three (3) months of Jefferson County Board of Health promulgation.
- 8.15.6** Coke By-Product Recovery Plant Equipment Leaks.
 - 8.15.6(a)** Owners or operators of coke by-product recovery plants shall adhere to the following increments of progress contained in the following schedule:
 - 8.15.6(a)(1)** Final plans for the initial leak check and inspection program required by Section 8.26.3 shall be submitted within one (1) month of Jefferson County Board of Health promulgation;
 - 8.15.6(a)(2)** Initiation of the leak check and inspection program required by Section 8.26.3 shall begin within three (3) months of Jefferson County Board of Health promulgation.
 - 8.15.6(b)** Any owner or operator of a coke by-product recovery plant subject to the compliance schedule of this Section shall certify to the Health Officer within five (5) days after the deadline of each increment of progress, whether the required increment of progress has been met.

8.16 Test Methods and Procedures.

Refer to Part 8.32 for a listing of EPA reference VOC Test Methods.

- 8.16.1** Determination of Volatile Organic Compound Content of Surface Coatings.
 - 8.16.1(a)** This method shall apply to ink, paint, varnish, lacquer, and other surface coatings.
 - 8.16.1(b)** For the purposes of this method, a representative sample of the surface coating shall be obtained at the point of delivery to the coater or any other point in the process that the Health Officer approves.
 - 8.16.1(c)** The volatile organic compound content of the sample shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Health Officer) and one of the following methods: (Revised October 10, 1990).
 - 8.16.1(c)(1)** Reference Method 24.
 - 8.16.1(c)(2)** Reference Method 24A.
 - 8.16.1(c)(3)** The Health Officer may accept, instead of the coating analysis methods required under Subparagraphs 8.16.1(c)(1) and 8.16.1(c)(2), a certification by the coating manufacturer of the composition of the coating if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA's document number 450/3-84-019, titled "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings."

- 8.16.1(d)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.
- 8.16.2** Test Procedure for Determination of VOC Emissions From Bulk Gasoline Terminals.
- 8.16.2(a)** Applicability. This method is applicable to determining VOC emissions rates at gasoline tank truck and trailer gasoline loading terminals employing vapor collection systems and either continuous or intermittent vapor control systems. This method is applicable to gasoline tank truck and trailer loading only as per Part 8.6.
- 8.16.2(b)** Test Methods and Procedures. The Volatile Organic Compound emissions from Bulk Gasoline Terminals shall be determined by one of the following methods:
- 8.16.2(b)(1)** Test methods and procedures required in 40 CFR 60.503, Subpart XX.
- 8.16.2(b)(2)** Reference Method 25.
- 8.16.2(b)(3)** Reference Method 25A.
- 8.16.2(b)(4)** Reference Method 25B.
- 8.16.2(c)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.
- 8.16.3** Determination of Volatile Organic Compound Emission Control System Efficiency.
- 8.16.3(a)** The provisions of this Section shall be applicable to any test method employed to determine the collection or control efficiency of any device or system designed, installed, and operated for the purpose of reducing volatile organic compound emissions.
- 8.16.3(b)** An efficiency demonstration shall include, but not be limited to, the following methods and procedures:
- 8.16.3(b)(1)** The volatile organic compound containing material shall be sampled and analyzed by EPA approved methods and procedures under Appendix A of 40 CFR 60 such that the emissions that could result from the use of the material can be quantified. For paints, inks, and other related coatings, the test methods and procedures shall be in accordance with Section 8.16.1. (Revised October 10, 1990).
- 8.16.3(b)(2)** The efficiency of any capture system used to capture and transport the volatile organic compound emissions from their point of origination to the control equipment shall be determined in accordance with the test methods and procedures in Section 8.16.13. (Revised September 11, 1991).
- 8.16.3(b)(3)** Samples of the volatile organic compound containing gas streams shall be taken simultaneously at the fugitive emission points from the permanent or temporary total enclosures, inlet and outlet of the emissions control device, and at least one centrally located point outside the permanent or temporary total enclosures and between the natural draft openings (background concentration). (Revised September 11, 1991).
- 8.16.3(b)(4)** The total combustible carbon content of the samples shall be determined by one of the following methods:
- 8.16.3(b)(4)(i)** Reference Method 25.
- 8.16.3(b)(4)(ii)** Reference Method 25A.
- 8.16.3(b)(4)(iii)** Reference Method 25B.
- 8.16.3(b)(4)(iv)** Reference Method 18. (Adopted October 10, 1990).
- 8.16.3(b)(5)** The efficiency of the control device shall be expressed as the fraction of total combustible carbon content reduction achieved.
- 8.16.3(b)(6)** The volatile organic compound mass emission rate shall be the sum of emissions from the control device, emissions not collected by the capture system, and capture system losses.
- 8.16.3(c)** A person proposing to conduct a VOC emission control system efficiency test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at

his option, observe the test. The notification shall contain the information required by, and in a format approved by, the Health Officer.

8.16.3(d) The written results of any capture or control efficiency testing shall be submitted to the Health Officer in an approved format within thirty (30) days after the date of the test. The written results shall also be retained at the location of the tested source for at least three (3) years after the date of the test. (Adopted September 11, 1991).

8.16.4 Determination of Solvent Metal Cleaning Volatile Organic Compound Emissions.

8.16.4(a) This method shall be applicable to determining volatile organic compound emissions from solvent metal cleaning equipment.

8.16.4(b) The purpose of this method is to quantify, by material balance, the amount of solvent input into a solvent metal cleaner over a sufficiently long period of time so that an average emission rate can be computed.

8.16.4(c) The test methods and procedures shall be performed in accordance with those specified in EPA's control technique guideline document number EPA-450/2-77-022, entitled "Control of Volatile Organic Emissions From Solvent Metal Cleaning."

8.16.4(d) A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.

8.16.5 Reserved.

8.16.6 Test Methods and Procedures for Graphic Arts.

8.16.6(a) The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with Part 8.22 by the methods in Paragraph 8.16.6 (c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

8.16.6(b) A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.

8.16.6(c) Test procedures to determine compliance with Part 8.22 shall be consistent with one of the following methods and procedures:

8.16.6(c)(1) EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041.

8.16.6(c)(2) Reference Method 24 A.

8.16.6(c)(3) Section 60.433, "Performance Test and Compliance Provisions," of 40 CFR 60, except compliance shall be determined on a daily time-period. (Revised October 10, 1990).

8.16.6(c)(4) For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Health Officer) and a method consistent with one of the following test methods: (Revised October 10, 1990).

8.16.6(c)(4)(i) Reference Method 25.

8.16.6(c)(4)(ii) Reference Method 25A.

8.16.6(c)(4)(iii) Reference Method 25B.

8.16.6(d) The Health Officer may accept, instead of ink solvent analysis, a certification by the ink manufacturer of the composition of the ink solvent, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3-84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased ink.

8.16.7 Test Methods and Procedures for Surface Coating of Miscellaneous Metal Parts and Products.

8.16.7(a) The owner or operator of a VOC source required to comply with Section 8.11.11 shall, at his own expense, demonstrate compliance by the methods of Paragraph 8.16.7(c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.

- 8.16.7(b)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.
- 8.16.7(c)** Test procedures to determine compliance with Section 8.11.11 shall be consistent with one of the following methods and procedures:
- 8.16.7(c)(1)** EPA Guideline Series document, "Measurement of Volatile Organic Compounds" EPA-450/2-78-041.
- 8.16.7(c)(2)** Reference Method 24.
- 8.16.7(c)(3)** Reference Method 24A.
- 8.16.7(c)(4)** For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Health Officer) and a method consistent with one of the following test methods: (Revised October 10, 1990).
- 8.16.7(c)(4)(i)** Reference Method 25.
- 8.16.7(c)(4)(ii)** Reference Method 25A.
- 8.16.7(c)(4)(iii)** Reference Method 25B.
- 8.16.7(d)** The Health Officer may accept, instead of the coating analysis required in Subparagraph 8.16.7(c)(2), a certification by the manufacturer of the composition of the coatings, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3/84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased coating.
- 8.16.8** Test Methods and Procedures for Petroleum Liquid Storage in Floating Roof Tanks.
- 8.16.8(a)** The owner or operator of any VOC source required to comply with Part 8.23 shall, at his own expense, demonstrate compliance by the methods of Paragraph 8.16.8(c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.
- 8.16.8(b)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.
- 8.16.8(c)** Compliance with Part 8.23 shall be determined by the methods and procedures in EPA Guideline Series document, "Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks," EPA-450/2-78-047.
- 8.16.9** Reserved.
- 8.16.10** Test Methods and Procedures for the Manufacture of Synthesized Pharmaceutical Products.
- 8.16.10(a)** The owner or operator of any VOC source required to comply with Part 8.18 shall, at his own expense, demonstrate compliance by the methods of Paragraph 8.16.10(c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.
- 8.16.10(b)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and in a format approved by, the Health Officer.
- 8.16.10(c)** Test procedures to determine compliance with Part 8.18 shall be consistent with EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041, and "Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products," EPA-450/2-78-029.
- 8.16.10(d)** If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:
- 8.16.10(d)(1)** exhaust gas temperature of all incinerators;
- 8.16.10(d)(2)** temperature rise across a catalytic incinerator bed;

- 8.16.10(d)(3)** breakthrough of VOC on a carbon adsorption unit; and,
- 8.16.10(d)(4)** any other continuous monitoring or recording device required by the Health Officer.
- 8.16.11** Test Methods and Procedures for the Surface Coating of Flatwood Paneling.
- 8.16.11(a)** The owner or operator of a VOC source required to comply with Section 8.11.10 shall, at his own expense, demonstrate compliance by the methods of Paragraph 8.16.11 (c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.
- 8.16.11(b)** A person proposing to conduct a VOC emissions test shall notify the Health Officer of the intent to test not less than thirty (30) days before the proposed initiation of the tests so the Health Officer may, at his option, observe the test. The notification shall contain the information required by, and be in a format approved by, the Health Officer.
- 8.16.11(c)** Test procedures to determine compliance with Section 8.11.10 shall be consistent with one of the following methods and procedures:
- 8.16.11(c)(1)** EPA Guideline Series document, "Measurement of Volatile Organic Compounds," EPA-450/2-78-041, and "Control of Volatile Organic Emissions from Existing Stationary Sources Volume VII: Factory Surface Coating of Flat Wood Paneling", EPA-450/2-78-032.
- 8.16.11(c)(2)** Reference Method 24.
- 8.16.11(c)(3)** Reference Method 24A.
- 8.16.11(c)(4)** For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Health Officer) and a method consistent with one of the following test methods: (Revised October 10, 1990).
- 8.16.11(c)(4)(i)** Reference Method 25.
- 8.16.11(c)(4)(ii)** Reference Method 25A.
- 8.16.11(c)(4)(iii)** Reference Method 25B.
- 8.16.11(c)(4)(iv)** Reference Method 18. (Adopted October 10, 1990).
- 8.16.11(d)** The Health Officer may accept, instead of the coating analysis required by Subparagraph 8.16.11(c)(2) a certification by the coating manufacturer of the composition of the coating, if supported by actual batch formulation records. Also, the manufacturer's certification shall be consistent with EPA document 450/3-84-019, titled "Procedures for Certifying Quantity of VOC Emitted by Paint, Ink, and Other Coatings." Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased coating.
- 8.16.12** Test Methods and Procedures for Leaks from Gasoline Tank Trucks and Vapor Collection Systems.
- 8.16.12(a)** The owner or operator of a VOC source shall, at his own expense, demonstrate compliance with Part 8.20 by the methods of Paragraph 8.16.12(c). All tests shall be conducted by, or under the direction of, a person qualified by training and/or experience in the field of air pollution testing.
- 8.16.12(b)** The owner or operator of a gasoline tank truck subject to Chapter 8 shall notify the Health Officer in writing of the date and location of a certification test at least ten (10) days before the anticipated test date. In order to observe a certification test, the Health Officer may postpone or reschedule the certification test date by written notice to the owner or operator within five (5) days after receipt of certification test notification.
- 8.16.12(c)** Test methods and procedures shall be consistent with one of the following methods and procedures:
- 8.16.12(c)(1)** Reference Method 27.
- 8.16.12(c)(2)** EPA Guideline Series document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems", EPA-450/2-78-051.
- 8.16.13** Capture Efficiency. Test procedures for Volatile Organic Compound emissions capture and control systems are those capture efficiency methods developed by the Environmental Protection Agency and promulgated at 40 CFR 51 Appendix M, Method 204 through Method 204f as may be amended or revised. They are hereby incorporated by reference into these Rules and Regulations.

8.17 Reserved.

8.18 Manufacture of Synthesized Pharmaceutical Products.

8.18.1 For the purpose of this Part, the following definitions apply:

8.18.1(a) "Condenser" means a device which cools a gas stream to a temperature which removes specific organic compounds by condensation.

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

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

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

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

8.18.1(f) "Production equipment exhaust system" means a device for collecting and directing out of the work area VOC fugitive emissions from reactor openings, centrifuge openings, and other vessel openings for the purpose of protecting workers from excessive VOC exposure.

8.18.2 This Part shall apply to all synthesized pharmaceutical manufacturing facilities.

8.18.3 This Part shall apply to all sources of VOCs, including reactors, distillation units, dryers, storage of VOCs, transfer of VOCs, extraction equipment, filters, crystallizers and centrifuges that have the potential to emit 6.8 kilograms per day (15 pounds per day) or more.

8.18.4 The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Part shall control the VOC emissions from all reactors, distillation operations, crystallizers, centrifuges and vacuum dryers that have the potential to emit 6.8 kilograms per day (15 pounds per day) or more of VOCs. Surface condensers or equivalent controls shall be used, provided that:

8.18.4(a) If surface condensers are used, the condenser outlet gas temperature must not exceed:

8.18.4(a)(1) -25 °C (-13 °F) when condensing a VOC of a vapor pressure greater than 300 mmHg (5.8 psia) as measured at 20 °C (68 °F);

8.18.4(a)(2) -15 °C (5 °F) when condensing a VOC of a vapor pressure greater than 150 mmHg (2.9 psia)) as measured at 20 °C (68 °F);

8.18.4(a)(3) 0 °C (32 °F) when condensing a VOC of a vapor pressure greater than 78 mmHg (1.5 psia)) as measured at 20 °C (68 °F);

8.18.4(a)(4) 10 °C (50 °F) when condensing a VOC of a vapor pressure greater than 52 mmHg (1.0 psia)) as measured at 20 °C (68 °F); or,

8.18.4(a)(5) 25 °C (77 °F) when condensing a VOC of a vapor pressure greater than 26 mmHg (0.5 psia)) as measured at 20 °C (68 °F).

8.18.4(b) If equivalent controls are used, the VOC emissions shall be reduced by at least as much as they would be by using a surface condenser which meets the requirements of Paragraph 8.18.4 (a).

8.18.5 The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Part shall reduce the VOC emissions from all air dryers and production equipment exhaust systems:

8.18.5(a) by at least ninety percent (90%) if emissions are 150 kilograms per day (330 pounds per day) or more of VOC; or,

8.18.5(b) to 15 kilograms per day (33 pounds per day) or less if emissions are less than 150 kilograms per day (330 pounds per day) of VOC.

8.18.6 The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Part shall:

- 8.18.6(a)** provide a vapor balance system or equivalent control that is at least ninety percent (90%) effective in reducing emissions from truck or railcar deliveries to storage tanks with capacities greater than 7,571 liters (2,000 gallons) that store VOC with vapor pressures greater than 210 mmHg (4.1 psia) at 20 °C (68 °F); and,
- 8.18.6(b)** install pressure/vacuum conservation vents set at + 1.5 mmHg (0.03 psia) on all storage tanks that store VOC with vapor pressures greater than 78 mmHg (1.5 psia) at 20 °C (68 °F), unless a more effective control system is used.
- 8.18.7** The owner or operator of a synthesized pharmaceutical facility subject to this Part shall enclose all centrifuges, rotary vacuum filters, and other filters which process liquids containing VOC with vapor pressures of 26 mmHg (0.5 psia) or more at 20 °C (68 °F).
- 8.18.8** The owner or operator of a synthesized pharmaceutical facility subject to this Part shall install covers on all in-process tanks containing a VOC at any time. These covers must remain closed, unless production, sampling, maintenance, or inspection procedures require operator access.
- 8.18.9** The owner or operator of a synthesized pharmaceutical manufacturing facility subject to this Part shall repair all leaks from which a liquid, containing VOC, can be observed running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair.
- 8.19 Reserved.**
- 8.20 Leaks From Gasoline Tank Trucks and Vapor Collection Systems.**
- 8.20.1** For the purpose of this Part, the following definitions apply:
- 8.20.1(a)** "Air Sticker" means a sticker to be affixed to a gasoline tank truck, representing issuance of an Air Permit and that the gasoline tank truck has been demonstrated during its most recent annual vapor leak testing to be leak-free.
- 8.20.1(b)** "Bottom filling" means the filling of a gasoline tank truck or stationary storage tank through an opening that is flush with the tank bottom.
- 8.20.1(c)** "Gasoline" means a petroleum distillate having a Reid vapor pressure of 27.6 kPa 207 mmHg (4 psia) or greater that is used as fuel for internal combustion engines.
- 8.20.1(d)** "Gasoline tank truck" means tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks of gasoline dispensing facilities, bulk gasoline plants or bulk gasoline terminals.
- 8.20.1(e)** "Gasoline dispensing facility" means any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage tanks.
- 8.20.1(f)** "Bulk gasoline terminal" means a gasoline storage facility which receives gasoline from refineries primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by gasoline tank truck; and has a daily throughput of more than 75,708 liters (20,000 gallons) of gasoline.
- 8.20.1(g)** "Bulk gasoline plant" means a gasoline storage and distribution facility with an average daily throughput of 75,708 liters (20,000 gallons) or less of gasoline per day averaged over the work days in a calendar year which receives gasoline from bulk terminals by gasoline tank truck or trailer, stores it in tanks, and subsequently dispenses the gasoline via account trucks to local farms, businesses, and gasoline dispensing facilities.
- 8.20.1(h)** "Vapor collection system" means a vapor transport system which uses direct displacement by the gasoline being transferred to force vapors from the vessel being loaded into either a vessel being unloaded or a vapor control system or vapor holding tank.
- 8.20.1(i)** "Vapor control system" means a system that prevents release to the atmosphere of at least ninety percent (90%) by weight of organic compounds in the vapors displaced from a vessel during transfer of gasoline.
- 8.20.2** This Part shall be applicable to all vapor collection and control systems at bulk plants, bulk terminals, and gasoline dispensing facilities required by Parts 8.5, 8.6, and 8.7, and to all vapor collection systems on gasoline tank trucks.
- 8.20.3** No person shall allow a gasoline tank truck subject to this Part to be filled or emptied unless the gasoline tank truck has: (Revised October 10, 1990).
- 8.20.3(a)** a vapor collection system that meets the test requirements of Paragraph 8.20.4(a); and
- 8.20.3(b)** a valid Jefferson County Department of Health Air Sticker attached and visibly displayed.

8.20.4 Air Permits for Gasoline Tank Trucks.

8.20.4(a) The owner or operator of a gasoline tank truck subject to this Part shall not load or cause to be loaded the said gasoline tank truck without a valid Air Sticker for the gasoline tank truck. An Air Permit and Air Sticker shall be issued by the Jefferson County Department of Health for the gasoline tank truck upon application by the owner or operator documenting that the gasoline tank truck has been leak checked by test method referenced in Paragraph 8.16.12 (c) and has during the test sustained a pressure change of no more than 5.6 mmHg (3.0 inches of H₂O) within five (5) consecutive minutes when pressurized to a gauge pressure of 34 mmHg (18 inches of H₂O), and, when evacuated to a gauge pressure of 11 mmHg (6.0 inches of H₂O) during the testing.

8.20.4(b) The Air Sticker shall be renewed annually upon successful demonstration by the owner or operator that the gasoline tank truck has been leak checked and passed the requirements of Paragraph 8.20.4(a).

8.20.4(c) The owner or operator shall display the Air Sticker in accordance with instructions provided by the Jefferson County Department of Health Air Pollution Control Program.

8.20.5 The owner or operator of a vapor collection system at a bulk plant, bulk terminal, gasoline dispensing facility, or gasoline tank truck subject to this Part shall:

8.20.5(a) design and operate the vapor collection system and the gasoline loading equipment in a manner that prevents:

8.20.5(a)(1) gauge pressure from exceeding 34 mmHg (18 inches of H₂O) and vacuum from exceeding 11 mmHg (6.0 inches of H₂O) in the gasoline tank truck;

8.20.5(a)(2) a reading equal to or greater than one hundred percent (100%) of the lower explosive limit (LEL, measured as propane) at 2.5 centimeters (1.0 inches) from all points on the perimeter of a potential leak source when measured by the method referenced in Section 8.16.12 during loading or unloading operation at gasoline dispensing facilities, bulk plants and bulk terminals;

8.20.5(a)(3) avoidable visible liquid leaks during loading or unloading operations at gasoline dispensing facilities, bulk plants and bulk terminals;

8.20.5(b) within fifteen (15) days, repair and retest a vapor collection or control system that exceeds the limit in Subparagraph 8.20.5(a)(2).

8.20.6 The Health Officer may, at any time monitor a gasoline tank truck, vapor collection system, or vapor control system to confirm continuing compliance with this Part. Monitoring to confirm the continuing existence of leak-tight conditions shall be consistent with the procedures described in Appendix B of the OAQPS Guideline Series document, "Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

8.20.7 Each vapor-laden gasoline tank truck shall be:

8.20.7(a) designed and maintained to be vapor tight, as required by this Part, during loading, unloading operations, and transport, with the exception of normal pressure/vacuum venting as required by DOT regulations; and

8.20.7(b) if filled in Jefferson County, filled only at:

8.20.7(b)(1) bulk gasoline plants complying with Part 8.5; or

8.20.7(b)(2) bulk gasoline terminals complying Part 8.6.

8.20.8 Each owner or operator of a gasoline tanker truck subject to this Part shall not transfer gasoline between tanker truck and a stationary storage tank within Jefferson County unless the gasoline dispensing facility has a valid (unexpired) gasoline dispensing facility permit issued by the Department.

8.21 **Reserved.**

8.22 **Graphic Arts.**

8.22.1 For the purpose of this Part, the following definitions apply:

8.22.1(a) "Packaging rotogravure printing" means printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into containers and labels for articles to be sold.

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

- 8.22.1(c)** "Flexographic printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique in which both the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials. The two roller inking system consists of an ink trough, a rubber covered fountain roller and a screened (Anilox) inking roller with cells of uniform size and depth. The fountain roller transfers the ink from the trough to the anilox roller cells. The anilox roller may be engraved or etched metal or ceramic. The cells of the anilox roller transfer the inks to the surface of the flexographic plate. (Revised November 14, 1990).
- 8.22.1(d)** "Roll printing" means the application of words, designs and pictures to a substrate by means of hard rubber or steel rolls each with only partial coverage.
- 8.22.1(e)** "Rotogravure printing" means the application of words, designs and pictures to a substrate by means of a roll printing technique which involves an intaglio or recessed image areas in the form of cells.
- 8.22.1(f)** "Letterpress printing" means the application of words, designs or pictures to a substrate by means of a raised ink surface in the mirror image of the printed material or "wrong-reading". The ink is transferred to the substrate directly from the raised surface. Inking rollers transfer the ink from the ink trough directly to the image carrier. Letterpress inks, which typically have the consistency of paste, are viscous and tacky. (Added November 14, 1990)
- 8.22.2** This Part shall apply to packaging rotogravure, printing rotogravure, and flexographic printing facilities.
- 8.22.3** No owner or operator of a packaging rotogravure, printing rotogravure or flexographic printing facility subject to this Part and employing solvent containing ink shall operate, cause, allow or permit the operation of the facility unless:
- 8.22.3(a)** The volatile fraction of ink, as it is applied to the substrate, contains twenty-five percent (25%) by volume or less of organic solvent and seventy-five percent (75%) by volume or more of water; or,
- 8.22.3(b)** The facility prints with ink which contains sixty percent (60%) by volume or more nonvolatile material; or,
- 8.22.3(c)** The owner or operator installs and operates:
- 8.22.3(c)(1)** A carbon adsorption system which reduces the volatile organic emissions from the capture system by at least ninety percent (90%) by weight; or,
- 8.22.3(c)(2)** An incineration system which oxidizes at least ninety percent (90%) of the VOCs (VOC measured as total combustible carbon) to carbon dioxide and water; or,
- 8.22.3(c)(3)** An alternative VOC emission reduction system demonstrated to have at least a ninety percent (90%) reduction efficiency, measured across the control system, that has been approved by the Health Officer.
- 8.22.4** A capture system shall be used in conjunction with the emission control systems in Paragraph 8.22.3(c). The design and operation of a capture system must be consistent with good engineering practice, and shall be required to provide for an overall reduction in VOC emissions of at least:
- 8.22.4(a)** seventy-five percent (75%) where a publication rotogravure process is employed;
- 8.22.4(b)** sixty-five percent (65%) where a packaging rotogravure process is employed; or,
- 8.22.4(c)** sixty percent (60%) where a flexographic printing process is employed.
- 8.22.5** If add-on control equipment is used, continuous monitors of the following parameters shall be installed, periodically calibrated, and operated at all times that the associated control equipment is operating:
- 8.22.5(a)** exhaust gas temperature of all incinerators;
- 8.22.5(b)** temperature rise across a catalytic incinerator bed;
- 8.22.5(c)** breakthrough of VOC on a carbon adsorption unit; and
- 8.22.5(d)** any other continuous monitoring or recording device required by the Health Officer.
- 8.22.6** The owner or operator of all Graphic Arts sources subject to the requirements in this Part shall maintain as a minimum the following records to demonstrate compliance in the time frame required by any regulation under this Part or Air Permit condition: (Adopted October 10, 1990).
- 8.22.6(a)** The quantity in gallons of all inks delivered to the application system; and,

- 8.22.6(b)** The quantity in gallons of all organic liquid dilutents (ink thinners and additives) added to the surface coatings; and,
- 8.22.6(c)** The quantity in gallons of all organic liquid solvents used for wash (blanket) or cleanup; and,
- 8.22.6(d)** The quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and,
- 8.22.6(e)** The following information on all inks and organic liquid solvents (dilutents, wash and cleanup):
 - 8.22.6(e)(1)** Manufacturer; and,
 - 8.22.6(e)(2)** Product name and manufacturer's code number; and,
 - 8.22.6(e)(3)** Density (pounds per gallon); and,
 - 8.22.6(e)(4)** VOC content in percent weight and volume; and,
 - 8.22.6(e)(5)** Solids content in percent weight and volume; and,
 - 8.22.6(e)(6)** Water content in percent weight and volume; and,
 - 8.22.6(e)(7)** Exempt VOC content in percent weight and volume.
- 8.22.6(f)** The permanent records required under Section 8.22.6 shall be retained by the owner or operator at the location of the regulated source for a minimum of two years after the date of record and shall be available to representatives of the Health Officer upon request.
- 8.22.6(g)** The recordkeeping provisions of Section 8.22.6 shall not apply if the Health Officer determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

8.23 Petroleum Liquid Storage In External Floating Roof Tanks.

- 8.23.1** For the purpose of this Part, the following definitions apply:
 - 8.23.1(a)** "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.
 - 8.23.1(b)** "Crude oil" means a naturally occurring mixture which consists of hydrocarbons and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid in the reservoir at standard conditions.
 - 8.23.1(c)** "Custody transfer" means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.
 - 8.23.1(d)** "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.
 - 8.23.1(e)** "Liquid-mounted seal" means a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.
 - 8.23.1(f)** "Petroleum liquids" mean crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
 - 8.23.1(g)** "Vapor-mounted seal" means any primary seal mounted continuously around the circumference of the tank. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.
 - 8.23.1(h)** "Waxy, heavy pour crude oil" means a crude oil with a pour point of 10 °C (50 °F) or higher as determined by the American Society for Testing Materials Standard D 97-66, "Test for Pour Point of Petroleum Oils."
- 8.23.2** This Part shall apply to all petroleum liquid storage vessels equipped with external floating roofs, having capacities greater than 151,146 liters (40,000 gallons).
- 8.23.3** This Part shall not apply to petroleum liquid storage vessels which:

- 8.23.3(a)** are used to store waxy, heavy pour crude oil;
 - 8.23.3(b)** have capacities less than 1,601,224 liters (423,000 gallons) and are used to store produced crude oil and condensate prior to custody transfer;
 - 8.23.3(c)** contain a petroleum liquid with a true vapor pressure of less than 78 mmHg (1.5 psia);
 - 8.23.3(d)** contain a petroleum liquid with a true vapor pressure less than 210 mmHg (4.0 psia); and,
 - 8.23.3(d)(1)** are of welded construction; and,
 - 8.23.3(d)(2)** presently possess a metallic-type shoe seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Health Officer; or
 - 8.23.3(e)** are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).
- 8.23.4** No owner or operator of a petroleum liquid storage vessel subject to this Part shall store a petroleum liquid in that vessel unless:
- 8.23.4(a)** the vessel has been fitted with:
 - 8.23.4(a)(1)** a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or
 - 8.23.4(a)(2)** a closure or other device which controls VOC emissions with an effectiveness equal to or greater than a seal required under Subparagraph 8.23.4(a)(1) as approved by the Health Officer.
 - 8.23.4(a)(3)** for vapor mounted seals, the area of accumulated gaps between the secondary seal and the tank wall are determined by the method in Paragraph 8.16.8(c), and shall not exceed 21.1 square centimeters per meter of the tank diameter (1.0 square inch per foot of tank diameter).
 - 8.23.4(b)** All seal closure devices meet the following requirements:
 - 8.23.4(b)(1)** there are no visible holes, tears, or other openings in the seal(s) or seal fabric;
 - 8.23.4(b)(2)** the seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and tank wall; and,
 - 8.23.4(b)(3)** for vapor mounted seals, the area of accumulated gaps between the secondary seal and the tank wall are determined by the method in Paragraph 8.16.8 (c), and shall not exceed 21.2 square centimeters per meter of tank diameter (1.0 square inch per foot of tank diameter).
 - 8.23.4(c)** All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:
 - 8.23.4(c)(1)** equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and,
 - 8.23.4(c)(2)** equipped with projections into the tank which remain below the liquid surface.
 - 8.23.4(d)** Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
 - 8.23.4(e)** Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and,
 - 8.23.4(f)** Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening.
- 8.23.5** The owner or operator of a petroleum liquid storage vessel with an external floating roof subject to this Part shall:
- 8.23.5(a)** perform routine inspections semiannually in order to insure compliance with Section 8.23.4, and the inspections shall include a visual inspection of the secondary seal gap;
 - 8.23.5(b)** measure the secondary seal gap annually in accordance with Section 8.16.8 when the floating roof is equipped with a vapor-mounted primary seal; and,
 - 8.23.5(c)** maintain written records of the throughput quantities, maximum true vapor pressure at storage conditions, types of volatile petroleum liquids stored and results of the inspections performed in Paragraphs 8.23.5(a) and 8.23.5(b). These records are to be maintained for a period of two calendar years beyond the year in which the record was developed. (Revised November 14, 1990; May 8, 1991).

8.23.6 The owner or operator of a petroleum liquid storage vessel with an external floating roof not subject to this Part, but containing a petroleum liquid with a true vapor pressure greater than 52 mmHg (1.0 psia), shall maintain records of the average monthly storage temperature, the type of liquid, throughput quantities, and the maximum true vapor pressure for all petroleum liquids with a true vapor pressure greater than 52 mmHg (1.0 psia).

8.23.7 The owner or operator of a petroleum liquid storage vessel subject to this Part shall submit to the Health Officer, as a minimum, an annual report detailing the results of routine monthly inspections, secondary seal gap measurements, and the amounts and physical properties of stored liquids.

8.23.8 Copies of all records and reports under Sections 8.23.5, 8.23.6, and 8.23.7 shall be retained by the owner or operator for a minimum of two (2) years after the date on which the record was made.

8.24 Large Petroleum Dry Cleaners.

8.24.1 Except as otherwise required by the context, terms used in this Part are defined in Part 1.3 or in this Section, as follows:

8.24.1(a) "Cartridge filter" means perforated cannisters containing filtration paper and/or activated carbon that are used in a pressurized system to remove solid particles and fugitive dyes from soil-laden solvent.

8.24.1(b) "Containers and conveyors of solvent" means piping, ductwork, pumps, storage tanks, and other ancillary equipment that are associated with the installation and operation of washers, dryers, filters, stills, and settling tanks.

8.24.1(c) "Dry cleaning" means a process for the cleaning of textiles and fabric products in which articles are washed in a nonaqueous solution (solvent) and then dried by exposure to a heated air stream.

8.24.1(d) "Perceptible leaks" mean any petroleum solvent vapor or liquid leaks that are conspicuous from visual observation; such as pools or droplets of liquid, or buckets or barrels of solvent or solvent-laden waste standing open to the atmosphere.

8.24.1(e) "Petroleum solvent" means organic material produced by petroleum distillation comprising a hydrocarbon range of 8 to 12 carbon atoms per organic molecule that exists as a liquid under standard conditions.

8.24.1(f) "Solvent recovery dryer" means a class of dry cleaning dryers that employs a condenser to liquify and recover solvent vapors evaporated in a closed-loop, recirculating stream of heated air.

8.24.2 Applicability. This Part shall apply to petroleum solvent washers, dryers, solvent filters, settling tanks, vacuum stills, and other containers and conveyors of petroleum solvent that are used in petroleum solvent dry cleaning facilities that consume 123,026 liters (32,500 gallons) or more of petroleum solvent annually.

8.24.3 Standards.

8.24.3(a) Each owner or operator of a petroleum solvent dry cleaning dryer shall either:

8.24.3(a)(1) Limit VOC emissions to the atmosphere to 3.5 kilograms (7.7 lbs) of volatile organic compounds per 100 kilograms (220 lbs) dry weight of articles dry cleaned, or

8.24.3(a)(2) Install and operate a solvent recovery dryer in a manner such that the dryer remains closed and the recovery phase continues until a final recovered solvent flow rate of 50 milliliters (1.7 ounces) per minute is attained.

8.24.3(b) Each owner or operator of a petroleum solvent filtration system shall either:

8.24.3(b)(1) Reduce the volatile organic compound content in all filtration wastes to 1.0 kilogram (2.2 lbs) or less per 100 kilograms (220 lbs) dry weight of articles dry cleaned, before disposal, and exposure to the atmosphere, or

8.24.3(b)(2) Install and operate a cartridge filtration system, and drain the filter cartridges in their sealed housings for 8 hours or more before their removal.

8.24.3(c) Each owner or operator shall repair all petroleum solvent vapor and liquid leaks within 3 working days after identifying the sources of the leaks. If necessary repair parts are not on hand, the owner or operator shall order these parts within 3 working days, and repair the leaks no later than 3 working days following the arrival of the necessary parts.

8.24.4 Testing and Monitoring.

8.24.4(a) To be in compliance with Subparagraph 8.24.3(a)(1) the owner or operator shall:

- 8.24.4(a)(1)** Calculate, record, and report to the Health Officer the weight of volatile organic compounds vented from the dryer emission control device calculated by using EPA Reference Methods, 1, 2, and 25A of 40 CFR 60 with the following specifications: (Revised October 10, 1990).
- 8.24.4(a)(1)(i)** Field calibration of the flame ionization analyzer with propane standards, and
- 8.24.4(a)(1)(ii)** Laboratory determination of the ratio of the flame ionization analyzer response to a given part per million by volume concentration of propane to the response to the same parts per million concentration of the volatile organic compounds to be measured, and
- 8.24.4(a)(1)(iii)** Determination of the weight of volatile organic compounds vented to the atmosphere by:
- 8.24.4(a)(1)(iii)(A)** The multiplication of the ratio determined in Subparagraph 8.24.4(a)(1)(ii) by the measured concentration of volatile organic compound gas (as propane) as indicated by the flame ionization analyzer response output record, and
- 8.24.4(a)(1)(iii)(B)** The conversion of the parts per million by volume value calculated in 8.24.4(a)(1)(iii)(A) into a mass concentration value for the volatile organic compounds present, and
- 8.24.4(a)(1)(iii)(C)** Multiply the mass concentration value calculated in 8.24.4(a)(1)(iii)(B) by the exhaust flow rate determined by using EPA Reference Test Methods 1 and 2.
- 8.24.4(a)(2)** Calculate, record, and report to the Health Officer the dry weight of articles dry cleaned.
- 8.24.4(a)(3)** Repeat Subparagraphs 8.24.4(a)(1) and (2) for normal operating conditions that encompass at least 30 dryer loads, which total not less than 1,800 kg (3,968 lbs) dry weight, and represent a normal range of variations in fabrics, solvents, load weights, temperatures, flow rates, and process deviations.
- 8.24.4(b)** To determine compliance with Subparagraph 8.24.3(a)(2), the owner or operator shall verify that the flow rate of recovered solvent from the solvent recovery dryer at the termination of the recovery phase is no greater than 50 milliliters (1.7 oz) per minute. This one-time procedure shall be conducted for a duration of no less than two weeks during which no less than 50 percent of the dryer loads shall be monitored for their final recovered solvent flow rate. The suggested point for measuring the flow rate of recovered solvent is from the solvent-water separator. Near the end of the recovery cycle, the flow of recovered solvent should be diverted to a graduated cylinder. The cycle should continue until the minimum flow of solvent is 50 milliliters (1.7 oz) per minute. The type of articles cleaned and the total length of the cycle should then be recorded.
- 8.24.4(c)** To be in compliance with Subparagraph 8.24.3(b)(1) the owner or operator shall:
- 8.24.4(c)(1)** Calculate, record, and report to the Health Officer the weight of volatile organic compounds contained in each of at least five 1.0 kilogram (2.2 lbs) samples of filtration waste material taken at intervals of at least 1 week by employing ASTM Method D322-80 (Standard Test Method for Gasoline Diluent in Used Gasoline Engine Oils by Distillation).
- 8.24.4(c)(2)** Calculate, record, and report to the Health Officer the total dry weight of articles dry cleaned during the intervals between removal of filtration waste samples, as well as the total mass of filtration waste produced in the same period.
- 8.24.4(c)(3)** Calculate, record, and report to the Health Officer the weight of volatile organic compounds contained in filtration waste material per 100 kilograms (220 lbs) dry weight of articles dry cleaned.
- 8.24.4(d)** Compliance with Paragraph 8.24.3(c) requires that each owner or operator make weekly inspections of washers, dryers, solvent filters, settling tanks, vacuum stills, and all containers and conveyors of petroleum solvent to identify perceptible volatile organic compound vapor or liquid leaks.

8.25 Reserved.

(Revised October 10, 1990).

8.26 Leaks From Coke By-Product Recovery Plant Equipment.

8.26.1 Except as otherwise required by the context, terms used in this Part are defined in Part 1.3 or in this Section as follows:

- 8.26.1(a)** "Closed vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow indicating devices that transport gas or vapor from a piece or pieces of equipment to a control device.
- 8.26.1(b)** "Coke by-product recovery plant" means any facility engaged in the separation and recovery of various fractions from coke oven gas, including tar, pitch, ammonium sulfate, naphthalene, and light oil.
- 8.26.1(c)** "Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment.
- 8.26.1(d)** "Conservation Vent" means a pressure-vacuum valve installed on a naphthalene separation unit cover that prevents the release of vapors during small changes in temperatures, barometric pressure, or liquid level.
- 8.26.1(e)** "Control Device" means an enclosed combustion device, vapor recovery system or flare.
- 8.26.1(f)** "Equipment" means each pump, valve, pressure relief valve, sampling connection, open-ended valve, and flange or connector in VOC service.
- 8.26.1(g)** "First attempt at repair" means taking rapid action for the purpose of stopping or reducing leakage of organic material to atmosphere using best practices.
- 8.26.1(h)** "In gas service" means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.
- 8.26.1(i)** "In light liquid service" means that the piece of equipment contains or contacts a process fluid that is a liquid at operating conditions, one or more components having a vapor pressure greater than 2.1 mmHg at 20 °C (0.04 psia at 68 °F), and the total concentration of the pure components, having a vapor pressure greater than 2.1 mmHg (0.04 psia at 68 °F) at 20 °C, is equal to or greater than 20 percent by weight.
- 8.26.1(j)** "In vacuum service" means that equipment is operating at an internal pressure which is at least 38 mmHg (0.73 psia) below ambient pressure.
- 8.26.1(k)** "In VOC service" means that the piece of equipment contains or contacts VOC.
- 8.26.1(l)** "Naphthalene Separation Unit" means the settling tank and associated equipment used in the recovery of naphthalene from the final cooler aqueous effluent.
- 8.26.1(m)** "Open-Ended Valve" means any valve, except pressure relief devices, having one side of the valve in contact with process fluid and one side open to the atmosphere, either directly or through open piping.
- 8.26.1(n)** "Pressure release" means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.
- 8.26.1(o)** "Quarter" means the following 3-month periods: January through March, April through June, July through September, and October through December.
- 8.26.1(p)** "Reference Method 21" means Reference Method 21 of Appendix A of 40 CFR 60. (Revised October 10, 1990).
- 8.26.1(q)** "Repaired" means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as indicated by one of the following: an instrument reading 10,000 ppm or greater, indication of liquids dripping, or indication by a sensor that a seal or barrier fluid system has failed.

8.26.2 The provisions of this Part shall apply to all equipment in VOC service in a Coke By-Product Recovery Plant.

8.26.3 General Requirements.

- 8.26.3(a)** Owners or operators of coke by-product recovery plants shall demonstrate compliance with the requirements of Sections 8.26.4 to 8.26.7. Compliance will be determined by review of records and reports, and inspection using the methods and procedures specified in Reference Method 21.
- 8.26.3(b)** Equipment that is in vacuum service shall be controlled by means of a closed vent system, or determined to achieve emission limitation at least equivalent to the requirements of Sections 8.26.4 to 8.26.7.
- 8.26.3(c)** Each component subject to the requirements of Section 8.26.3 shall be marked with weatherproof tags that will be readily obvious to both plant personnel and the Health Officer, and have an identification number.

8.26.3(d) Any component in VOC service that appears to be leaking on the basis of sight, smell, or sound, shall be repaired with an initial attempt as soon as possible and final repair within 15 calendar days.

8.26.4 Pumps in Light Liquid Service.

8.26.4(a) Each pump in light liquid service shall be monitored each calendar quarter to detect leaks by the methods specified in Reference Method 21.

8.26.4(b) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

8.26.4(c) If an instrument reading of 10,000 ppm or greater is measured, or if there are indications of liquids dripping from the pump seal, a leak is detected.

8.26.4(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in Section 8.26.8.

8.26.5 Valves in Gas and Light Liquid Service.

8.26.5(a) Each valve in gas and light liquid service shall be monitored each calendar quarter to detect leaks by the methods specified in Reference Method 21, except as provided in Paragraph 8.26.5(d).

8.26.5(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

8.26.5(c) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.

8.26.5(d) Valves in gas and light liquid service may be exempted from Section 8.26.5 provided:

8.26.5(d)(1) An owner or operator demonstrates that a valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

8.26.5(d)(2) A valve has no external actuating mechanism in contact with the process fluid.

8.26.6 Pressure Relief Valves in Gas Service.

8.26.6(a) Each pressure relief valve in gas service shall be monitored each calendar quarter to detect leaks by methods specified in Reference Method 21.

8.26.6(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

8.26.6(c) When a leak is detected, excluding overpressure releases, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

8.26.7 Open Ended Valves.

8.26.7(a) Each open-ended valve shall be equipped with a cap, blind flange, plug, or a second valve, except during operations requiring fluid flow through the open-ended valve.

8.26.7(b) Each open ended valve equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

8.26.7(c) Open-ended valves which serve as a sampling connection shall be equipped with a closed vent system such that:

8.26.7(c)(1) Purged process fluid be returned to the process line with zero VOC emissions to atmosphere, or

8.26.7(c)(2) Collect and recycle the purged process fluid with zero VOC emissions to atmosphere.

8.26.8 Delay of Repair.

8.26.8(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair is technically infeasible without process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

8.26.8(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

8.26.8(c) Delay of repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device or collected and recycled with zero emissions to atmosphere.

8.26.9 Naphthalene Separation Unit Emissions.

8.26.9(a) Each owner or operator of any open settling tank used in the separation of naphthalene from final cooler aqueous effluent shall enclose and seal the tank to contain VOC emissions. The cover may include the following items of equipment:

8.26.9(a)(1) A vent equipped with a water leg seal or a conservation vent; and

8.26.9(a)(2) An access hatch which is equipped with a gasket.

8.26.9(b) The cover may be removed when required by process operations, but must be replaced at the completion of operations.

8.26.10 Recordkeeping Requirements.

8.26.10(a) Owners or operators of coke by-product recovery plants shall maintain monitoring records for all components subject to the requirements of this Part. This log shall contain at a minimum the following data:

8.26.10(a)(1) The type of component,

8.26.10(a)(2) The location of the component,

8.26.10(a)(3) The identification number of the component,

8.26.10(a)(4) The date on which a leaking component is discovered, initial repair attempted, and the component is repaired,

8.26.10(a)(5) The date and instrument reading of the recheck monitoring after a leaking component is repaired,

8.26.10(a)(6) A record of the calibration of the monitoring instrument, and

8.26.10(a)(7) The identification of components awaiting repair according to Section 8.26.8.

8.26.10(b) Copies of the monitoring log shall be retained by the owner or operator for a minimum of 2 years after the date on which the record was made or the report prepared.

8.26.10(c) Copies of the monitoring log shall immediately be made available to the Health Officer or his representative upon verbal or written request, at any reasonable time.

8.26.11 Reporting Requirements. Owners or operators of coke by-product recovery plants shall submit reports for each calendar quarter to the Health Officer listing the following data:

8.26.11(a) The total number of components inspected,

8.26.11(b) The total number of components found leaking,

8.26.11(c) The total number of components awaiting repair per delay of repair provisions of Section 8.26.8.

8.26.12 The Health Officer, upon written notice, may modify the monitoring, recordkeeping and reporting requirements.

8.27 Emissions from Coke By-Product Recovery Plant Coke Oven Gas Bleeder.

8.27.1 For the purpose of this Part, all terms not defined herein shall have the meaning given them in Section 8.26.1 or in Part 1.3, and for the following term the specific definition given shall apply:

8.27.1(a) "Coke Oven Gas Bleeder" means that piece of equipment which vents surplus coke oven gas (gas not consumed in the process or supplied to other sources) directly to the atmosphere.

8.27.2 Owners or operators of coke by-product recovery plants shall equip each coke oven gas bleeder with a closed vent system capable of capturing and transporting excess gas to a control device. All coke oven gas from the closed vent system shall be passed through the said control device which removes at least 95 percent of the VOC from such gas before it is discharged to the atmosphere.

- 8.27.3** Owners or operators of control device used to comply with Part 8.27 shall monitor these control devices to ensure that they are operated and maintained in conformance with their design specifications.
- 8.27.4** Closed vent systems shall be monitored to determine compliance with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, and, by visual inspections, quarterly and at other times requested by the Health Officer.
- 8.27.5** Control devices used to comply with the provisions of this Part shall be operated at all times when emissions may be vented to them from the closed vent systems.
- 8.28 Manufacture of Laminated Countertops.**
- 8.28.1** Except as otherwise required by the context, terms used in this Part are defined in Part 1.3 or in this Section as follows:
- 8.28.1(a)** "Adhesive" means any substance that is capable of bonding surfaces together by attachment.
- 8.28.1(b)** "Adhesive Application System" means all operations and equipment which applies, conveys, and dries an adhesive, including, but not limited to, spray booths, flow coaters, flash off areas, air dryers, and ovens.
- 8.28.1(c)** "Elastomeric Adhesive" means any adhesive containing natural or synthetic rubber.
- 8.28.1(d)** "Flash-off Area" means the space between the application area and the oven.
- 8.28.1(e)** "Lamination of Countertops" means the bonding of a decorative material such as vinyl, plastic, or linoleum, to particle board, composition board, plywood, or other similar materials to manufacture a cabinet or countertop using an adhesive.
- 8.28.2** This Part shall apply to all facilities which have the potential to emit more than 90.7 Mg (100 tons) per year of VOCs from the manufacture of counter and cabinet tops by bonding decorative laminates to wood, particle board, composition board, or similar materials.
- 8.28.3** No owner or operator of a facility manufacturing laminated countertops subject to this Part may cause, allow, or permit the discharge into the atmosphere in excess of 0.06 kilogram of VOC per liter (0.5 lb/gal) of adhesive, excluding water, as delivered to the adhesive application system.
- 8.28.4** Compliance with the emission limit under this Part shall be demonstrated by one or more of the following methods:
- 8.28.4(a)** For low solvent adhesive technology, the VOC mass emission rate shall be demonstrated via certification by the adhesive manufacturer as to the composition of the adhesive, if supported by actual batch formulation records. Sufficient data to determine as-applied formulation must be provided if the as-applied formulation is different from the as-purchased adhesive.
- 8.28.4(b)** For add-on control equipment, the VOC mass emission rate shall be determined using the test procedures found in 40 CFR 60 (except that references to Administrator are changed to Health Officer) and a method consistent with one of the following test methods: (Revised October 10, 1990).
- 8.28.4(b)(1)** Reference Method 25.
- 8.28.4(b)(2)** Reference Method 25A.
- 8.28.4(b)(3)** Reference Method 25B.
- 8.28.4(b)(4)** Reference Method 18. (Adopted October 10, 1990).
- 8.28.5** Recordkeeping. (Adopted October 10, 1990).
- 8.28.5(a)** The owner or operator of a laminated countertop manufacturing line subject to the requirements in Part 8.28 shall maintain as a minimum the following daily records to demonstrate compliance in the time frame required by Paragraph 8.28.5(b) or Air Permit condition:
- 8.28.5(a)(1)** the quantity in gallons of all adhesives delivered to the application system; and
- 8.28.5(a)(2)** the quantity in gallons of all organic liquid diluents (thinners and additives) added to the adhesives; and
- 8.28.5(a)(3)** the quantity in gallons of all organic liquid solvents used for wash or cleanup; and

- 8.28.5(a)(4)** the quantity in gallons of all organic liquid waste properly contained and shipped out for proper disposal and a certification of the waste density and percent VOC content by weight; and
- 8.28.5(a)(5)** the date of each application of adhesives, diluents and usage of wash and cleanup solvents; and
- 8.28.5(a)(6)** the regulation(s) applicable to the laminated countertop manufacturing line for which the records are being maintained; and
- 8.28.5(a)(7)** the daily records shall be kept in the units necessary to verify compliance (i. e. pounds of VOC per gallon of adhesive delivered to the application system, excluding water and exempt VOC); and
- 8.28.5(a)(8)** the application method and the substrate material type; and
- 8.28.5(a)(9)** where applicable, the continuous combustion temperature in degrees Fahrenheit of a thermal incinerator control system; and
- 8.28.5(a)(10)** where applicable, the temperature rise across the catalyst bed and exhaust temperature in degrees Fahrenheit of a catalytic incinerator control system; and
- 8.28.5(a)(11)** where applicable, the inlet and outlet temperature in degrees Fahrenheit of the cooling medium of a condenser control system; and
- 8.28.5(a)(12)** the following information on all adhesives and organic liquid solvents (diluents, additives, wash and cleanup):
 - 8.28.5(a)(12)(i)** manufacturer (supplier); and
 - 8.28.5(a)(12)(ii)** product name and manufacturer's code number; and
 - 8.28.5(a)(12)(iii)** density (pounds per gallon); and
 - 8.28.5(a)(12)(iv)** VOC content in percent weight and volume; and
 - 8.28.5(a)(12)(v)** solids content in percent weight and volume; and
 - 8.28.5(a)(12)(vi)** water content in percent weight and volume; and
 - 8.28.5(a)(12)(vii)** exempt VOC content in percent weight and volume; and
 - 8.28.5(a)(12)(viii)** pounds of VOC per gallon of adhesive delivered to the application system, excluding water and exempt VOC.
- 8.28.5(b)** The compliance demonstration time frame for an individual laminated countertop manufacturing line shall be a twenty-four (24) hour period (calendar day).
- 8.28.5(c)** The daily records required under Paragraph 8.28.5(a) shall be retained by the owner or operator at the location of the regulated source for a minimum of two years after the date of record and shall be available to representatives of the Health Officer upon request.
- 8.28.5(d)** The recordkeeping provisions of Section 8.28.5 shall not apply if the Health Officer determines that alternative records would be sufficient to provide assurance that the source is operating in compliance on a twenty-four (24) hour basis and these alternative requirements are incorporated as permit conditions for the source. In no case can recordkeeping requirements be waived or the stringency of the emissions limit be relaxed.

8.29 Paint Manufacture.

- 8.29.1** Except as otherwise required by the context, terms used in this Part are defined in Part 1.3 or in this Section, as follows:
 - 8.29.1(a)** "Bottom filling" means the filling of a tank in VOC service through an opening that is flush with the bottom of the tank.
 - 8.29.1(b)** "Conservation Vents" means a pressure-vacuum valve installed on a fixed roof tank that prevents the release of vapors during small changes in temperatures, barometric pressure, or liquid level.
 - 8.29.1(c)** "Enamel" means a glossy paint that forms a smooth hard coat after application and drying.
 - 8.29.1(d)** "Equipment" means each pump, valve, pressure relief valve, sampling connection, open-ended valve, and flange or connector in VOC service.
 - 8.29.1(e)** "In-VOC service" means that the piece of equipment contains or contacts a fluid which is at least 10% VOC by weight.

- 8.29.1(f)** "Paint" means a liquid suspension of finely divided pigment particles in a liquid composed of a resin or binder and volatile solvent. Paint includes water-based, solvent-based oil, and alkyd paints.
- 8.29.1(g)** "Repaired" means that equipment is adjusted or otherwise altered in order to eliminate indications of a leak.
- 8.29.1(h)** "Submerged filling" means the filling of a tank through a pipe or hose whose discharge is under the surface level of the liquid in the tank being filled.
- 8.29.1(i)** "Varnish" means a homogeneous solution of natural or synthetic resins, dyes, and oils dispersed in organic solvents. The term varnish includes varnishes, resins, and lacquers.
- 8.29.2** This Part shall apply to all facilities which have the potential to emit more than 90.7 Mg (100 tons) per year of VOCs from the manufacture or processing of paints, varnishes, lacquers, enamels, and other allied surface coating products.
- 8.29.3** The owner or operator of a paint, varnish, lacquer, enamel, and other allied surface coatings manufacturing or processing facility subject to this Part shall meet the following equipment and operating requirements:
- 8.29.3(a)** The owner or operator shall equip tanks storing VOC with a vapor pressure greater than 78 mmHg (1.5 psia) at 20°C (68°F), with pressure/vacuum Conservation Vents set at +1.5 mmHg (0.029 psia), except where more effective air pollution control is used. Stationary VOC storage containers with a capacity greater than 946 liters (250 gallons) shall be equipped with a submerged fill pipe or bottom fill, except where more effective air pollution control is used.
- 8.29.3(b)** The owner or operator shall install covers on all open-top tanks used for the production of non-water base coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 8.29.3(c)** The owner or operator shall install covers on all tanks containing VOC used for cleaning equipment. These covers shall remain closed except when operator access is required.
- 8.29.3(d)** The owner or operator shall operate and maintain all grinding mills according to the manufacturer's specifications. The manufacturer's specifications shall be kept on file at the facility and made available to the Health Officer on request.
- 8.29.3(e)** The owner or operator shall check each pump by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected.
- 8.29.3(f)** If any equipment in VOC service appears to be leaking on the basis of sight, smell, or sound, the following requirements shall apply:
- 8.29.3(f)(1)** A readily visible identification shall be attached to the leaking equipment. The identification may be removed upon repair.
- 8.29.3(f)(2)** The leaking equipment shall be repaired with an initial attempt as soon as practicable, but no later than 15 calendar days after it is detected.
- 8.29.3(f)(3)** When a leak is detected, the owners or operators shall record the date of detection and repair and the said record shall be retained at the facility in a readily accessible location for at least 2 years from the date of each detection or each repair attempt.
- 8.29.4** All gases or vapors from varnish cooking (resin reactor) operations shall be collected and passed through a control device which removes at least eighty-five percent (85%) of the VOC from such gases or vapors before they are discharged to the atmosphere.
- 8.30** **Reserved.**
- 8.31** **Seasonal Afterburner Shutdown - VOC Control Only.**
- 8.31.1** This Part shall apply to natural gas-fired afterburners installed to control emissions of volatile organic compounds (VOCs) for the purpose of reducing ambient ozone concentrations. It does not apply to flares, VOCs vented to boilers, afterburners operated principally for odor control, or afterburners operated to control toxic or hazardous substances.
- 8.31.2** The months of applicability for the seasonal afterburner shutdown shall be December, January, and February.
- 8.31.3** Seasonal shutdown of natural gas-fired afterburners shall be allowed in Jefferson County under the following conditions:

- 8.31.3(a)** the afterburner is for the control of VOC emissions only; and
- 8.31.3(b)** a petition to shutdown an afterburner is submitted in writing to the Health Officer thirty (30) days prior to the shutdown date each season specifying the period(s) within the seasonal afterburner shutdown period when the shutdown shall be in effect for the afterburner; and
- 8.31.3(c)** written approval is granted by the Health Officer for each afterburner; and
- 8.31.3(d)** monthly records in a format approved by this Department are maintained during the periods of afterburner shutdown of the quantity of VOC emissions from the source for which the afterburner is normally used as an air pollution control device.

8.32 List of EPA Approved and Equivalent Test Methods and Procedures for the Purpose of Determining VOC Emissions.

Reference Method 1, "Sample and Velocity Traverses for Stationary Sources," 40 CFR 60, Appendix A.

Reference Method 1A, "Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts," 40 CFR 60, Appendix A. (Revised October 10, 1990).

Reference Method 2, "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)," 40 CFR 60, Appendix A. (Revised October 10, 1990).

Reference Method 2A, "Direct Measurement of Gas Volume Through Pipes and Small Ducts," 40 CFR 60, Appendix A. (Revised October 10, 1990).

Reference Method 2B, "Determination of Exhaust Gas Volume Flow Rate from Gasoline Vapor Incinerators," 40 CFR 60, Appendix A.

Reference Method 2C, "Determination of Stack Gas Velocity and Volumetric Flow Rate from Small Stacks or Ducts (Standard Pitot Tube)," 40 CFR 60, Appendix A.

Reference Method 2D, "Measurement of Gas Volume Flow Rates in Small Pipes and Ducts," 40 CFR 60, Appendix A.

Reference Method 3, "Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight," 40 CFR 60, Appendix A.

Reference Method 3A, "Determination of Oxygen and Carbon Dioxide Concentrations in Emissions From Stationary Sources (Instrumental Analyzer Procedure)," 40 CFR 60, Appendix A.

Reference Method 4, "Determination of Moisture Content in Stack Gases," 40 CFR 60, Appendix A.

Reference Method 18, "Determination of Gaseous Organic Compounds by Gas Chromatography," 40 CFR 60, Appendix A.

Reference Method 21, "Determination of Volatile Organic Compound Leaks," 40 CFR 60, Appendix A.

Proposed Reference Method 23, "Determination of Halogenated Organics from Stationary Sources," 45 FR 39766, June 11, 1980, as the same may be amended or revised. 40 CFR 60, Appendix A.

Reference Method 24, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings," 40 CFR 60, Appendix A.

Reference Method 24A, "Determination of Volatile Matter Content and Density of Printing Inks and Related Coatings," 40 CFR 60, Appendix A.

Reference Method 25, "Determination of Total Gaseous Nonmethane Organic Emissions as Carbon," 40 CFR 60, Appendix A.

Reference Method 25A, "Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer," 40 CFR 60, Appendix A.

Reference Method 25B, "Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer," 40 CFR 60, Appendix A.

Reference Method 27, "Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test," 40 CFR 60, Appendix A.

Test Methods 204, 204A-204F for Determining Capture Efficiency of Volatile Organic Compounds. 40 CFR 51 Appendix M.

CHAPTER 9 – CONTROL OF CARBON MONOXIDE EMISSIONS

(Adopted January 28, 1972.)

9.1 Cupolas, Blast Furnaces and Basic Oxygen Steel Furnaces

No person shall emit the carbon monoxide gases generated during the operation of a grey iron cupola, blast furnace, or basic oxygen steel furnace unless they are burned at 1,300 °F for 0.3 seconds or greater in a direct flame afterburner or equivalent device equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

9.2 Petroleum Processes

No person shall emit a carbon monoxide waste gas stream from any catalyst regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the waste gas stream is burned at 1,300 °F for 0.3 seconds or greater in a direct-flame afterburner or boiler equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

CHAPTER 10 – CONTROL OF NITROGEN OXIDES EMISSIONS

(Adopted January 28, 1972. Revised May 2, 2001; May 8, 2002; November 12, 2003; June 15, 2005; June 13, 2007; May 13, 2009; May 11, 2016; and August 14, 2024)

10.1 Standards for Portland Cement Kilns.

10.1.1 Applicability. The requirements of this Rule apply to Portland cement kilns in Jefferson County with process rates of at least the following:

10.1.1(a) Long dry kilns-12 short tons per hour (TPH) of clinker produced;

10.1.1(b) Long wet kilns-10 short TPH of clinker produced;

10.1.1(c) Preheater kilns-16 short TPH of clinker produced; and

10.1.1(d) Precalciner and preheater/precincer kilns-22 short TPH of clinker produced.

10.1.2 Definitions. For the purpose of this Rule, the following definitions apply:

10.1.2(a) "Clinker" means the product of a Portland cement kiln from which finished cement is manufactured by milling and grinding.

10.1.2(b) "Long Dry Kiln" means a kiln 14 feet or larger in diameter, 400 feet or greater in length, which employs no preheating of the feed. The inlet feed to the kiln is dry.

10.1.2(c) "Long Wet Kiln" means a kiln 14 feet or larger in diameter, 400 feet or greater in length, which employs no preheating of the feed. The inlet feed to the kiln is a slurry.

10.1.2(d) "Low-NO_x Burners" means combustion equipment designed to reduce flame turbulence, delay fuel/air mixing, and establish fuel rich zones for initial combustion.

10.1.2(e) "Mid-kiln System Firing" means secondary firing in kiln systems by injecting solid fuel at an intermediate point in the kiln system using a specially designed fuel injection mechanism for the purpose of decreasing nitrogen oxide (NO_x) emissions through:

10.1.2(e)(1) Burning part of the fuel at a lower temperature; and

10.1.2(e)(2) Reducing conditions at the fuel injection point that may destroy some of the NO_x formed upstream in the kiln burning zone.

10.1.2(f) "Portland Cement" means a hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, usually containing one or more of the forms of calcium sulfate as an interground addition.

10.1.2(g) "Portland Cement Kiln" means a system, including any solid, gaseous or liquid fuel combustion equipment, used to calcine and fuse raw materials, including limestone and clay, to produce Portland cement clinker.

10.1.2(h) "Precalciner Kiln" means a kiln where the feed to the kiln system is preheated in cyclone chambers and utilize a second burner to calcine material in a separate vessel attached to the preheater prior to the final fusion in a kiln which forms clinker.

10.1.2(i) "Preheater Kiln" means a kiln where the feed to the kiln system is preheated in cyclone chambers prior to the final fusion in a kiln which forms clinker.

10.1.3 Standard Requirements. After May 31, 2004, the owner or operator of any Portland cement kiln subject to this Rule shall not operate the kiln during May 1 through September 30 unless the kiln has installed and operates during May 1 to September 30 with at least one of the following: low-NO_x burners, mid-kiln system firing, alternative control techniques or reasonably available control technology approved by the Director and the EPA as achieving at least the same emissions decreases as with low-NO_x burners or mid-kiln system firing.

10.1.4 The owner or operator subject to the requirements of Section 10.1.3 above shall comply with the requirements as follows:

10.1.4(a) By May 31, 2004, submit to the ADEM the identification number and type of each Portland cement kiln subject to Part 10.1, the name and address of the facility where the kiln is located, and the name and telephone number of the person responsible for demonstrating compliance with Section 10.1.3; and

- 10.1.4(b)** Submit data, electronically and in a format prescribed and provided by the ADEM, which reports the total NO_x emissions from May 1 through September 30 of each year as follows:
- 10.1.4(b)(1)** Annual reporting. For each kiln, beginning with emission year 2004 and every year thereafter, by March 31st of the calendar year following the emission year being reported, the data specified in 40 CFR §§51.122(c)(1) and (2) must be submitted to the ADEM.
- 10.1.4(b)(2)** Triennial reporting. For each kiln, beginning with emission year 2005 and every third year thereafter, by March 31st of the calendar year following the emission year being reported, the data specified in 40 CFR §§51.122(c)(3) must be submitted to the ADEM.
- 10.1.4(b)(3)** Year 2003 reporting. For each kiln, by March 31, 2004, the data specified in 40 CFR §51.122(c)(3) must be submitted to the ADEM.
- 10.1.4(b)(4)** Year 2007 reporting. For each kiln, by March 31, 2008, the data specified in 40 CFR §51.122(c)(3) must be submitted to the ADEM.
- 10.1.5** By May 31, 2004, the owner or operator of a kiln subject to this Rule shall submit to the ADEM a demonstration of compliance with the requirements of Section 10.1.3. If compliance is being achieved by use of prescribed equipment, for example low-NO_x burners or mid-kiln system firing, the demonstration of compliance shall be written certification to the ADEM that this equipment is installed and in use. If compliance is being achieved by use of alternative control techniques, approved by the Director and EPA, demonstration of compliance shall be specified by the Director and EPA. In case of compliance proposed to be achieved by use of alternative control techniques, a plan for compliance demonstration shall be submitted to the ADEM by May 1, 2003. Upon receipt, the Department shall immediately forward a copy of the plan to the EPA. By November 1, 2003, the Director shall specify in writing to the owner or operator of the kiln how compliance shall be demonstrated, this specification consistent with methods and requirements specified by the EPA following its review of the submitted plan.
- 10.1.6** By December 31 of each year, beginning in 2004, the owner or operator of a Portland cement kiln subject to Part 10.1 shall submit to the ADEM a written certification that compliance with the requirements of Section 10.1.3 has been maintained during that year's five-month period May 1 through September 30. The methods of determining that this compliance has been maintained shall be as specified on the major source operating permit issued for the facility at which the kiln is operated.
- 10.1.7** Beginning May 1, 2004, the owner or operator of a Portland cement kiln subject to Part 10.1 shall maintain records for May 1 through September 30 of each year that include the data as follow:
- 10.1.7(a)** The date, time, and duration of any startup, shutdown, or malfunction in the operation of the cement kiln or its emissions monitoring equipment or of any scheduled maintenance activity that affects NO_x emissions or emissions monitoring;
- 10.1.7(b)** The results of any compliance testing; and
- 10.1.7(c)** Other data required by permit to be maintained.
- 10.1.8** The records listed in Section 10.1.7 shall be retained on-site for a minimum of 2 years following the calendar year for which they are made and shall be made available to the ADEM for review upon request.
- 10.1.9** The requirements of Part 10.1 shall not apply to periods of scheduled maintenance activities that affect NO_x emissions.
- 10.2 Nitric Acid Manufacturing**
- 10.2.1** Except as provided in Section 10.2.2, no person shall cause or permit the emission of nitrogen oxides calculated as nitrogen dioxide, from nitric acid manufacturing plants in excess of 5.5 pounds per ton of 100 percent acid produced.
- 10.2.2** For nitric acid manufacturing plants within a designed capacity greater than one hundred and fifty (150) tons per day of one hundred percent acid, no person shall cause or permit the emission of nitrogen oxides, calculated as nitrogen dioxide, from such manufacturing plants in excess of twenty (20) pounds per ton of one hundred percent acid produced.
- 10.3 NO_x Emissions from Electric Utility Steam Generating Units.**
- 10.3.1** Part 10.3 applies to existing coal-fired electric utility steam generating installations in Jefferson County.
- 10.3.2** During the compliance period specified in Section 10.3.3 below, no person shall cause or permit the operation of a coal-fired electric utility steam generating installation in Jefferson County in such a manner that nitrogen oxides (NO_x) are

emitted in excess of the emission limits established by the Alabama Department of Environmental Management's rules under ADEM Admin. Code R. 335-3-8-.03 and specified in the Major Source Operating Permit for the affected unit(s).

10.3.3 Beginning May 1, 2003, and each year thereafter, the compliance period shall begin May 1 and end on September 30 of each year. Compliance shall be based on a 30-day rolling average.

10.3.3(a) The first calculated 30-day averaging period shall be May 1 through May 30.

10.3.3(b) The last calculated 30-day averaging period shall be September 1 through September 30.

10.3.4 Testing, Recordkeeping, and Reporting

10.3.4(a) Continuous emissions monitoring systems (CEMS) to measure nitrogen oxide emissions from each affected unit shall be installed and operated at locations approved by the Director. The CEMS shall meet the specifications and procedures of 40 CFR Part 75 and will be certified and maintained in accordance with 40 CFR Part 75. In addition, each of the CEMS shall undergo a relative accuracy test audit (RATA) on an annual basis at times approved by the Director.

10.3.4(b) Records of the 30-day average nitrogen oxide emission rate for the affected units shall be kept for a period of five (5) years.

10.3.4(c) A written report of the 30-day average nitrogen oxide emission rates for the affected units shall be submitted to the Department by the 15th day of each month during the period from May 1 to September 30 of each year. The first report shall be submitted by June 15 and shall include data for the month of May. The final report shall be submitted by October 15 and shall include data for the month of September.

10.3.4(d) Any exceedances of the NO_x emission rate specified in Section 10.3.2 shall be reported to the Department within two (2) working days of the date of the exceedance.

10.3.4(e) Additional testing, recordkeeping, and reporting requirements may be necessary and will be specified by the Director at such times as they become necessary.

10.4 Standards for Stationary Reciprocating Internal Combustion Engines

10.4.1 Applicability. The requirements of Part 10.4 apply to any person that owns or operates a facility at which one or more large affected engines were located during the baseline period.

10.4.2 Definitions. For the purpose of this Rule, the following definitions apply:

10.4.2(a) "Affected engine" means an engine that was operated within the fine grid during the baseline period and was included in the NO_x SIP Call Inventory.

10.4.2(b) "Control period" means the period beginning May 1 of a year and ending on September 30 of the same year, inclusive, beginning in 2007.

10.4.2(c) "Fine grid portion of the State" or "fine grid" means the geographic area that includes the Counties of Autauga, Bibb, Blount, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Colbert, Coosa, Cullman, Dallas, De Kalb, Elmore, Etowah, Fayette, Franklin, Greene, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Limestone, Macon, Madison, Marion, Marshall, Morgan, Perry, Pickens, Randolph, Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, and Winston, located within the State of Alabama.

10.4.2(d) "Large affected engine" means any affected engine whose average daily NO_x emission rate was greater than one ton per day during the baseline period.

10.4.2(e) "NO_x potential to emit" means the maximum capacity of an engine to emit NO_x under its physical and operational design or applicable permit condition for a given period of time. Any physical limitation on the capacity of a source's potential to emit an air pollutant, including air pollution control equipment or combustion modification, shall be treated as part of its design if the limitation is enforceable by the Director.

10.4.2(f) "NO_x SIP Call baseline period" or "baseline period" means the period beginning May 1, 1995, and ending on September 30, 1995, inclusive.

10.4.2(g) "NO_x SIP Call baseline period utilization" or "baseline utilization" means the amount of work performed by an affected engine during the baseline period in brake horsepower-hours (bhp-hr).

- 10.4.2(h)** “NO_x SIP Call Inventory” means the NO_x emission inventory published March 2, 2000 at 65 FR 11222 and amended April 21, 2004 at 69 FR 21603.
- 10.4.2(i)** “Projected 2007 Ozone Season Base NO_x Emissions” or “projected 2007 emissions” means, for an affected engine, the projected uncontrolled NO_x emissions (in tons) for the 2007 ozone season as published in the NO_x SIP Call Inventory and denoted as the variable labeled ‘SNOX07’. For an affected engine that is not a large affected engine to which a control device is added or a combustion modification is made after September 30, 1995, if the Director approves a demonstration made by the person subject to this Rule that the Projected 2007 Ozone Season Base NO_x Emissions published in the NO_x SIP Call Inventory for that affected engine was not calculated from the correct 1995 ozone season emissions, the Projected 2007 Ozone Season Base NO_x Emissions for that affected engine will be the product of its uncontrolled 1995 NO_x hourly emission rate (lb/hr), the number of hours it operated during the 1995 ozone season, and the 1995-2007 growth factor assigned to that affected engine in the NO_x SIP Call Inventory denoted as the variable labeled ‘GF9507.’ The demonstration should provide representative emission test data or manufacturer’s emission data for the affected engine applicable during the 1995 ozone season and records documenting its hours of operation during the 1995 ozone season.
- 10.4.2(j)** “Projected 2007 Ozone Season utilization” or “projected utilization” means the baseline utilization of an affected engine multiplied by the 1995-2007 growth factor assigned to that affected engine in the NO_x SIP Call Inventory denoted as the variable labeled ‘GF9507.’
- 10.4.2(k)** “Ozone season” means the period beginning May 1 of a year and ending on September 30 of the same year, inclusive.
- 10.4.2(l)** “Stationary reciprocating internal combustion engine” or “engine” means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not self-propelled or intended to be propelled while performing its function.
- 10.4.3** NO_x Emission Standards.
- 10.4.3(a)** Any person subject to this Rule shall reduce NO_x emissions from one or more affected engines within the fine grid during each control period by an amount not less than 82% of the 2007 Ozone Season Base NO_x Emissions (rounded to the nearest whole ton) of the large affected engines currently or formerly located at a facility that is under their control or ownership.
- 10.4.3(b)** For the purposes of the compliance plan required by Section 10.4.4, NO_x emission reductions shall be calculated according to the following criteria:
- 10.4.3(b)(1)** For an affected engine to which a control device is added or a combustion modification is made after September 30, 1995, the NO_x emission reductions shall be equal to the difference (in tons) in the affected engine’s projected 2007 emissions and the affected engine’s NO_x potential to emit at the controlled emission rate during a control period.
- 10.4.3(b)(2)** For an affected engine that is removed from service after September 30, 1995, and the facility’s operating capacity equivalent to the removed affected engine’s projected utilization is replaced, in part or in total, during a control period by a NO_x emitting device installed after September 30, 1995, the NO_x emission reductions shall be the difference (in tons) in the removed affected engine’s projected 2007 emissions and the replacement device’s NO_x potential to emit during a control period for the operating capacity (in brake horsepower-hours) equivalent to the portion of the removed affected engine’s projected utilization that it will replace, not to exceed 100%.
- 10.4.3(b)(3)** For an affected engine that is removed from service after September 30, 1995, and the facility’s operating capacity (in brake horsepower-hours) equivalent to the removed affected engine’s projected utilization is replaced, in part or in total, during a control period by a device that does not emit NO_x installed after September 30, 1995, the NO_x emission reductions shall be the removed affected engine’s projected 2007 emissions except where a NO_x emitting device is installed at the removed affected engine’s facility after the date that the device that does not emit NO_x was installed.
- 10.4.3(b)(4)** For an affected engine that is removed from service after September 30, 1995, and the facility’s operating capacity (in brake horsepower-hours) equivalent to the removed affected engine’s projected utilization is replaced, in part or in total, during a control period by a device that does not emit NO_x and a NO_x emitting device is installed at the removed affected engine’s facility after the date that the device that does not emit NO_x was installed, the NO_x emission reductions shall be the difference (in tons) in the removed affected engine’s projected 2007 emissions and the NO_x emitting device’s NO_x potential to emit during a control period for its operating capacity

(in brake horsepower-hours) equivalent to the removed affected engine's projected utilization it will replace, not to exceed 100%.

10.4.3(c) The following shall not be considered NO_x emission reductions for the purposes of complying with this Rule:

10.4.3(c)(1) A restriction on an affected engine's hours of operation during a control period, including a prohibition from operating;

10.4.3(c)(2) A NO_x emission limitation enforceable by the Director placed upon an affected engine to which no control device was added or combustion modification was made after September 30, 1995; or

10.4.3(c)(3) The removal of an affected engine from service if that affected engine is placed into service at another location within the fine grid.

10.4.3(c)(4) NO_x emission reductions achieved at a facility that is not owned or operated by the person who is responsible for demonstrating compliance with this Rule.

10.4.3(d) Demonstrability and Enforceability of NO_x Emission Reductions.

10.4.3(d)(1) NO_x emission reductions calculated in accordance with Subparagraph 10.4.3(b)(1), 10.4.3(b)(2), or 10.4.3(b)(4) shall be demonstrable and enforceable if:

10.4.3(d)(1)(i) An hourly NO_x emission limitation (in pounds per hour, "lb/hr") is incorporated into a permit enforceable by the Director for the affected engine or replacement device that is to be operated during a control period (the hourly NO_x emission limitation shall be equal to the hourly emission rate used to calculate the NO_x potential to emit for the affected engine or replacement device in the source's compliance plan), and

10.4.3(d)(1)(ii) A performance test conducted in accordance with Section 10.4.5 determines that the affected engine or replacement device is capable of complying with the hourly NO_x emission limitation.

10.4.3(d)(2) For any affected engine removed from service, NO_x emission reductions calculated in accordance with Subparagraphs 10.4.3(b)(2) through 10.4.3(b)(4) shall be demonstrable and enforceable if the applicable permit has been modified or voided, whichever is applicable, such that the affected engine's authorization to operate ceases on or before the first day of the control period for which NO_x emission reductions would be credited for its removal.

10.4.3(e) NO_x emission reductions achieved to comply with Part 10.4 shall not be considered creditable for compliance with any other applicable requirement and shall not be considered a contemporaneous emission decrease for the purposes of netting or offsets under Chapter 2, Parts 2.4 and 2.5.

10.4.4 Compliance Plan.

10.4.4(a) Any person subject to this Rule shall submit a complete compliance plan to the Director no later than May 1, 2006.

10.4.4(b) Contents. The compliance plan shall contain the following:

10.4.4(b)(1) Name and address of person subject to this Rule, including the name and telephone number of the person responsible for demonstrating compliance with the submitted compliance plan.

10.4.4(b)(2) Identification of the large affected engines for which the person is subject to this Rule to include:

10.4.4(b)(2)(i) Facility name and location;

10.4.4(b)(2)(ii) Engine manufacturer, model, and maximum design capacity (brake horsepower);

10.4.4(b)(2)(iii) NO_x SIP Call Inventory source identification number ('POINTID'); and

10.4.4(b)(2)(iv) 2007 Ozone Season Base NO_x Emissions.

10.4.4(b)(3) Calculation of the NO_x emission reductions required by Paragraph 10.4.3(a).

10.4.4(b)(4) Identification of the affected engines from which NO_x emission reductions will be achieved to include:

10.4.4(b)(4)(i) Facility name and location;

10.4.4(b)(4)(ii) Engine manufacturer, model, and maximum design capacity (brake horsepower);

10.4.4(b)(4)(iii) NO_x SIP Call Inventory source identification number ('POINTID'); and

- 10.4.4(b)(4)(iv)** 2007 Ozone Season Base NO_x Emissions.
- 10.4.4(b)(5)** A narrative to describe the manner in which the NO_x emission reductions will be achieved;
- 10.4.4(b)(6)** A numerical demonstration of the NO_x emission reductions to be achieved that identifies the following for each affected engine or replacement device during a control period:
- 10.4.4(b)(6)(i)** Maximum hourly emission rate, in lb/hr;
 - 10.4.4(b)(6)(ii)** Maximum design capacity, in brake horsepower;
 - 10.4.4(b)(6)(iii)** NO_x potential to emit (based upon 3,672 hours during a control period) for the affected engine or replacement device;
 - 10.4.4(b)(6)(iv)** The baseline utilization of the affected engine that will be removed, if applicable; and
 - 10.4.4(b)(6)(v)** For a replacement device that emits NO_x, the maximum operating capacity (in brake horsepower-hours) during a control period.
- 10.4.4(c)** Modifications.
- 10.4.4(c)(1)** Any person subject to this Rule shall submit a request to modify the approved compliance plan if:
- 10.4.4(c)(1)(i)** An affected engine removed from service for which NO_x emission reductions are relied upon for compliance with this Rule will be reinstalled and operated within the fine grid during a control period;
 - 10.4.4(c)(1)(ii)** The operating capacity equivalent to a removed affected engine's projected utilization at the location at which the affected engine was located during the baseline period will be replaced, in part or in total, by the installation of another device that is not included in the approved compliance plan; or
 - 10.4.4(c)(1)(iii)** The actual hourly NO_x emission rate of an affected engine or replacement device in the approved compliance plan is determined to exceed the applicable hourly NO_x emission limitation, except where it has been determined that maintenance or repair of the affected engine or replacement device has reduced the actual hourly NO_x emission rate below the applicable hourly NO_x emission limitation.
- 10.4.4(c)(2)** A request to modify a compliance plan shall be submitted at least 60 days prior to the control period in which the modification would be applicable, unless another time period is specifically approved by the Director.
- 10.4.4(d)** Completeness Determination. Within 60 days of receipt of a compliance plan or a request to modify a compliance plan, the Director shall notify the person in writing of the completeness of the submitted plan.
- 10.4.4(e)** Approval. A compliance plan shall be considered approvable if:
- 10.4.4(e)(1)** All permits required by Paragraph 10.4.3(d) have been modified, issued, or voided, as applicable;
 - 10.4.4(e)(2)** All performance tests required by Section 10.4.5 have been conducted, reviewed, and accepted; and
 - 10.4.4(e)(3)** The plan establishes that demonstrable and enforceable NO_x emission reductions required by Paragraph 10.4.3(a) would be achieved.
- 10.4.5** Performance Testing.
- 10.4.5(a)** Any person subject to this Rule which relies upon NO_x emission reductions achieved from an affected engine in accordance with Subparagraph 10.4.3(b)(1) or a replacement device in accordance with Subparagraph 10.4.3(b)(2) or 10.4.3(b)(4) to comply with this Rule shall conduct a performance test in accordance with EPA Reference Method 7E or 20, as appropriate, found at Appendix A of 40 CFR 60 on the affected engine or replacement device to determine the actual hourly NO_x emission rate, in lb/hr.
- 10.4.5(b)** The performance test shall be conducted at least 60 days, but not more than one year, prior to the first control period for which NO_x emission reductions are to be achieved by that affected engine or replacement device, unless another period of time is specifically approved by the Director.
- 10.4.5(c)** At least 30 days prior to conducting the test, the person subject to Part 10.4 shall submit written notification of testing to the Director. To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- 10.4.5(c)(1)** The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, and the names of the persons and/or testing company that will conduct the tests.
- 10.4.5(c)(2)** A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- 10.4.5(c)(3)** A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

10.4.6 Emission Monitoring.

- 10.4.6(a)** For any affected engine or NO_x emitting replacement device that operates during a control period from which demonstrable and enforceable NO_x emission reductions are to be achieved, the person subject to this Rule shall conduct emission monitoring in accordance with one of the following:
 - 10.4.6(a)(1)** Conduct emission testing on that affected engine or NO_x emitting replacement device at least once during each control period, or at least once during the six-month period preceding the first day of the control period. Emission testing shall be conducted in accordance with EPA Reference Method 7E or 20, as appropriate, found at Appendix A of 40 CFR 60 or an alternative EPA-approved method approved by the Director. Notification of emission testing shall be made in accordance with the requirements of Paragraph 10.4.5(c);
 - 10.4.6(a)(2)** Install and operate during each control period a continuous emission monitoring system that complies with 40 CFR 60 or 40 CFR 75 of the Code of Federal Regulations; or
 - 10.4.6(a)(3)** Implement a parametric emission monitoring system based upon actual emission testing and correlations with operating parameters. The installation, implementation, and use of any parametric emission monitoring system must be approved by the Director in writing prior to implementation.

10.4.7 Recordkeeping and Reporting.

- 10.4.7(a)** The person subject to this Rule shall maintain records of the following for each affected engine or replacement device from which demonstrable and enforceable NO_x emission reductions are to be achieved during each control period:
 - 10.4.7(a)(1)** Identification and location of each affected engine or replacement device;
 - 10.4.7(a)(2)** Calendar date of record;
 - 10.4.7(a)(3)** Number of hours operated during the control period;
 - 10.4.7(a)(4)** Type and quantity of fuel used during the control period;
 - 10.4.7(a)(5)** Date and results of each emissions-related inspection and a summary of any emissions-related corrective maintenance, if taken;
 - 10.4.7(a)(6)** The results of all emission tests; and
 - 10.4.7(a)(7)** Additional information described in any compliance plan pursuant to Section 10.4.4 or parametric emission monitoring system approved pursuant to Paragraph 10.4.6(c).
- 10.4.7(b)** Records required by Paragraph 10.4.7(a) above shall be maintained at the facility at which the affected engine or replacement device is located for a period of five (5) calendar years from the date of generation of each record. The records shall be made available for inspection upon request.
- 10.4.7(c)** The person subject to this Rule shall submit a report of the results of each emission test conducted in accordance with Section 10.4.5 or Paragraph 10.4.6(a) to the Director within 30 days of the completion of the actual test, unless an extension of time is specifically approved by the Director.

10.5 New Combustion Sources

- 10.5.1** No person shall cause or permit emissions of nitrogen oxides from a new gas-fired boiler with a capacity of 250 million BTU/hr or more in excess of 0.20 pounds per million BTU of heat input per hour.
- 10.5.2** No person shall cause or permit emissions of nitrogen oxides from a new oil-fired boiler with a capacity of 250 million BTU/hr or more in excess of 0.30 pounds per million BTU of heat input per hour.

10.5.3 No person shall cause or permit emission of nitrogen oxides from a new coal-fired boiler with a capacity of 250 million BTU per hour or more in excess of 0.7 pounds per million BTU of heat input per hour.

10.5.4 For purposes of this Rule, the total heat input from all similar fuel combustion units at a plant or premises shall be used for determining the maximum allowable emission of nitrogen oxides that passes through a stack or stacks.

10.6 Standards for New Combined-Cycle Electric Generating Units

10.6.1 Applicability. The requirements of this Rule apply to all natural gas-fired and fuel oil-fired combined-cycle electric generating units which commence operation on or after April 1, 2003. The requirements of this Rule do not pre-empt the applicability of any other State or Federal regulations.

10.6.2 Definitions. For the purposes of this Rule, the following definitions apply:

10.6.2(a) "Combined-Cycle Electric Generating Unit" means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

10.6.2(b) "Commence Operation" means to have begun to produce steam, gas, or other heated medium used to generate electricity for use or sale, including test generation.

10.6.2(c) "Fuel Oil" means any petroleum-based fuel (including diesel fuel) as defined by the American Society for Testing and Materials in ASTM D396-90a, "Standard Specification for Fuel Oils".

10.6.2(d) "Natural Gas" means a naturally fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

10.6.3 Emission Limitations.

10.6.3(a) No person shall cause or permit the emissions of nitrogen oxides from combined-cycle electric generating units fired by natural gas in excess of 4.0 ppmvd at 15% O₂.

10.6.3(b) No person shall cause or permit the emissions of nitrogen oxides from combined-cycle electric generating units fired by fuel oil in excess of 15.0 ppmvd at 15% O₂.

10.6.4 Compliance Method. Compliance with the nitrogen oxides emissions limitations in Section 10.6.3 shall be determined by EPA Reference Method 20 as found in 40 CFR 60, Appendix A [and incorporated by reference in Section 13.3.1].

10.7 TR NO_x Annual Trading Program

The Alabama Department of Environmental Management Regulations governing the TR NO_x Annual Trading Program (335-3-8-.07 through 335-3-8-.38) are incorporated by reference. Amendments to these rules after August 14, 2024 will be automatically adopted upon their effective date.

10.8 TR NO_x Ozone Season Group 2 Trading Program

The Alabama Department of Environmental Management Regulations governing the TR NO_x Ozone Season Group 2 Trading Program (335-3-8-.39 through 335-3-8-.70) are incorporated by reference. Amendments to these rules after August 14, 2024 will be automatically adopted upon their effective date.

10.9 NO_x Budget Program

The Alabama Department of Environmental Management Regulations governing the NO_x Budget Program (335-3-8-.71 and 335-3-8-.72) are incorporated by reference. Amendments to these rules after August 14, 2024 will be adopted automatically upon their effective date.

CHAPTER 11 – CONTROL OF EMISSIONS FROM MOTOR VEHICLES

(Adopted January 28, 1972.)

11.1 Visible Emission Restrictions for Motor Vehicles.

- 11.1.1 No persons shall cause or permit the emission of visible air contaminants from gasoline-powered motor vehicles, operated upon any street, highway or other public place, for longer than five consecutive seconds.
- 11.1.2 No person shall cause or permit the emission of visible air contaminants from diesel-powered motor vehicles and other movable sources, of a shade or density greater than 20 percent opacity for longer than five consecutive seconds.
- 11.1.3 Uncombined Water. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of the Part, such section shall not apply.

11.2 Ignition System and Engine Speed.

All 1968 and subsequent model year gasoline-powered motor vehicles shall be maintained so as to be in compliance with the following requirements:

- 11.2.1 The number of revolutions per minute of an engine while operating at idle speed shall be in accordance with the specifications and determined under conditions published by the manufacturer, but in no case shall the idle speed be less than the minimum specified in such published specifications. Revolutions per minute shall be tested for accuracy and precision at reasonable intervals.
- 11.2.2 Ignition timing of an engine shall comply with the published specifications of the manufacturer as determined in accordance with procedures and conditions specified by the manufacturer.
- 11.2.3 All cylinders shall be firing.

11.3 Crankcase Ventilation Systems.

The positive crankcase ventilation system on all 1968 and subsequent model year gasoline powered motor vehicles, except motorcycles and motor tricycles, and all 1969 and subsequent model year gasoline powered motor vehicles, including motorcycles and motor tricycles, shall meet the following requirements:

- 11.3.1 The plumbing and connections shall be properly connected as installed by the manufacturer and free of obstructions and leakage.
- 11.3.2 There shall be a negative pressure (suction) at the inlet of the crankcase ventilation valve.
- 11.3.3 The crankcase ventilation valve shall be freely operative so as to regulate the flow of gases through the system.

11.4 Exhaust Emission Control System.

- 11.4.1 Air Injection System. Exhaust emission control air injection systems of those gasoline powered motor vehicles so equipped by the manufacturer shall operate so that:
 - 11.4.1(a) The air delivery hoses, connections, and air distribution manifold shall be properly connected as installed by the manufacturer and free of obstructions and leakage.
 - 11.4.1(b) The air compressor drive belt tension shall be within manufacturer's specifications.
 - 11.4.1(c) There is a positive air flow from the air pump to the air delivery distribution manifold.
 - 11.4.1(d) The check valve prevents any reverse air flow from the air distribution manifold out through the check valve inlet.
 - 11.4.1(e) The anti-backfire valve, gulp-valve, air bypass valve, or other similar device with the same function permits the passage of air from the air pump to the exhaust manifolds, except when the carburetor throttle is closed rapidly from an open position as in deceleration.
- 11.4.2 Engine Modification Systems. All vacuum control valves, vacuum lines, mechanical linkage, electrical circuits and switches peculiar to certain engine modification systems shall be properly connected as installed on all 1968 and subsequent model year gasoline-powered motor vehicles so equipped by the manufacturer.
- 11.4.3 Other Exhaust Emission Control Systems. Any other exhaust emission control system, other than air injection or engine modification, which is installed or incorporated in a motor vehicle in compliance with Federal motor vehicle pollution

control regulations shall be maintained in good operable conditions as specified by the manufacturer and shall be used at all times that the motor vehicle is operated.

11.4.4 The requirements of this Part shall apply to all gasoline-powered motor vehicles with the following exceptions:

11.4.4(a) Vehicles of 1967 or earlier model year.

11.4.4(b) Vehicles not equipped by the manufacturer with exhaust emission control air injection systems.

11.4.4(c) Motor vehicles with an engine displacement of less than 50 cubic inches (819.35 cubic centimeters).

11.5 Evaporative Loss Control Systems.

The evaporative loss control systems or devices designed and installed on 1972 and subsequent model year gasoline-powered motor vehicles shall be maintained in an operable condition such that the system or device continues to reduce or prevent the emission to the atmosphere of the vapors of the hydrocarbon fuel contained in the fuel tank, carburetor, and/or fuel pump of the motor vehicle.

11.6 Other Prohibited Acts.

In addition to the other strictures contained in this Chapter, no person shall cause, suffer, allow, or permit the removal, disconnection, and/or disabling of a positive crankcase ventilator, exhaust emission control system, or evaporative loss control system which has been installed on a motor vehicle, nor shall any person defeat the design purpose of any such motor vehicle pollution control device by installing therein or thereto any part or component which is not a comparable replacement part or component of the device, provided that:

11.6.1 The components or parts of emission control systems on motor vehicles may be disassembled or reassembled for the purpose of repair and maintenance in proper working order.

11.6.2 Components and parts of emission control systems may be removed and replaced with like components and parts intended by the manufacturer for such replacement.

11.6.3 The provisions of this Part shall not apply to salvage operations on wrecked motor vehicles when the engine is so damaged that it will not be used again for the purpose of powering a motor vehicle on a highway.

11.7 Effective Date.

The provisions of this Chapter shall become effective sixty (60) days from the date of its adoption and promulgation.

CHAPTER 12 - RULES OF ADMINISTRATIVE PROCEDURE

(Adopted February 13, 1985; Revised May 8, 1991, April 19, 2017)

This Chapter sets forth the procedures for the hearing and determination of appeals of administrative actions of the Jefferson County Department of Health Air Pollution Control Program by the Jefferson County Board of Health. Any such hearing shall be held and determined in accordance with (and subject to) the procedures and requirements set forth in the most current "Rules of Procedure for Hearing Appeals of Administrative Actions of the Alabama Department of Environmental Management," contained in Chapter 335-2-1 of the Alabama Administrative Code (hereinafter, the "Rules of Procedure"). This Chapter fully adopts and incorporates the Rules of Procedure, with the following exceptions: (1) wherever the Rules of Procedure refer to the "Commission" (i.e., the Environmental Management Commission of the Alabama Department of Environmental Management), insert the Jefferson County Board of Health; (2) wherever the Rules of Procedure refer to the "Department" (i.e., the Alabama Department of Environmental Management), insert the Jefferson County Department of Health Air Pollution Control Program; (3) any hearing held pursuant to this Chapter shall be held in Birmingham, Alabama, unless the parties agree otherwise and the Hearing Officer approves; and (4) filing may be accomplished by personal, private-service, or mail delivery addressed to:

Health Officer
Jefferson County Board of Health
1400 Sixth Avenue South
Birmingham, Alabama 35233

CHAPTER 13 - STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

(Adopted June 9, 1976; Revised February 10, 1982; April 10, 1985; April 8, 1987; February 8, 1989; October 10, 1990; May 8, 1991; September 11, 1991; December 8, 1993; January 10, 1996; March 11, 1998; October 13, 1999; June 14, 2000; November 8, 2000; May 8, 2002; March 12, 2003; November 12, 2003; June 15, 2005; May 10, 2006; March 14, 2007; June 13, 2007; May 14, 2008; November 12, 2008; May 13, 2009; May 12, 2010; September 14, 2011; November 14, 2012; May 8, 2013; May 11, 2016; and August 14, 2024.)

13.1 General.

13.1.1 The Environmental Protection Agency Regulations and the Appendices applicable thereto, governing Standards of Performance for New Stationary Sources (40 CFR Part 60 and Appendices) designated in Parts 13.2 and 13.3 are incorporated by reference as they exist in 40 CFR Part 60 (July 1, 2024), including all amendments to each Subpart unless specifically excluded, as amended by the word or phrase substitutions given in Part 13.4. References for specific documents containing the complete text of subject regulations are given in Appendix C to these regulations. Authorities which are not delegable to Jefferson County Department of Health are also listed in Appendix C.

[NOTE: The standards pertaining to the Consolidated Federal Air Rule are located in Chapter 14A.]

13.1.1(a) The materials incorporated by Reference are available for purchase or inspection at the Jefferson County Department of Health at 1400 6th Avenue South, Birmingham, Alabama 35233.

13.1.2 The emission standards in this Chapter shall supersede the emission standards under Chapters 5, 6, 7, 8, 9, and 10 if both of the following criteria are met:

13.1.2(a) The source category is subject to the regulations in this Chapter for the specific pollutants to which an emission standard under this chapter applies; and

13.1.2(b) The emission standard under Chapters 5, 6, 7, 8, 9, and 10 is more stringent than the emission standard in this Chapter for the specific pollutants regulated.

13.1.3 Definitions. For purposes of this Chapter, the definitions listed in Section 60.2 Subpart A, Part 60, Title 40 of the Code of Federal Regulations will apply.

13.2 Designated Standards of Performance: Standards of Performance for New Stationary Sources located at 40 CFR 60.

13.2.1 Subpart A – General Provisions. *(Adopted 10/13/1999.)*

13.2.2 Subpart D – Fossil Fuel-Fired Steam Generators. *(Adopted 6/9/1976.)*

13.2.2(a) Subpart Da - Electric Utility Steam Generating Units. *(Adopted 2/10/1982.)*

13.2.2(b) Subpart Db - Industrial-Commercial-Institutional Steam Generating Units. *(Adopted 4/8/1987.)*

13.2.2(c) Subpart Dc - Small Industrial-Commercial-Institutional Steam Generating Units. *(Adopted 3/11/1998.)*

13.2.3 Subpart E – Incinerators. *(Adopted 6/9/1976.)*

13.2.3(a) Subpart Ea - Municipal Waste Combustors for Which Construction Is Commenced After December 20, 1989 and on or Before September 20, 1994. *(Adopted 9/11/1991.)*

13.2.3(b) Subpart Eb – Large Municipal Waste Combustors for Which Construction Is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996. *(Adopted 3/11/1998.)*

13.2.3(c) Subpart Ec - Hospitals/Medical/Infectious Waste Incinerators. *(Adopted 3/11/1998.)*

13.2.4 Subpart F - Portland Cement Plants. *(Adopted 6/9/1976.)*

13.2.5 Subpart G - Nitric Acid Plants. *(Adopted 6/9/1976.)*

13.2.5(a) Subpart Ga – Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011. *(Adopted 5/8/2013.)*

13.2.6 Subpart H - Sulfuric Acid Plants. *(Adopted 6/9/1976.)*

13.2.7 Subpart I - Hot Mix Asphalt Facilities. *(Adopted 6/9/1976.)*

- 13.2.8** Subpart J - Petroleum Refineries. *(Adopted 6/9/1976.)*
- 13.2.8(a)** Subpart Ja – Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After May 14, 2007. *(Adopted 5/13/2009.)*
- 13.2.9** Subpart K - Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. *(Adopted 6/9/1976.)*
- 13.2.9(a)** Subpart Ka - Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984. *(Adopted 4/8/1987.)*
- 13.2.9(b)** Subpart Kb - Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984. *(Adopted 2/8/1989.)*
- 13.2.10** Reserved.
- 13.2.11** Reserved.
- 13.2.12** Subpart L - Secondary Lead Smelters. *(Adopted 6/9/1976.)*
- 13.2.13** Subpart M - Secondary Brass and Bronze Ingot Production Plants. *(Adopted 6/9/1976.)*
- 13.2.14** Subpart N – Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced after June 11, 1973. *(Adopted 6/9/1976.)*
- 13.2.14(a)** Subpart Na - Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for which construction is commenced after January 20, 1983. *(Adopted 4/8/1987.)*
- 13.2.15** Subpart O - Sewage Treatment Plants. *(Adopted 6/9/1976.)*
- 13.2.16** Subpart P - Primary Copper Smelters. *(Adopted 6/9/1976.)*
- 13.2.17** Subpart Q - Primary Zinc Smelters. *(Adopted 6/9/1976.)*
- 13.2.18** Subpart R - Primary Lead Smelters. *(Adopted 6/9/1976.)*
- 13.2.19** Subpart S - Primary Aluminum Reduction Plants. *(Adopted 6/9/1976.)*
- 13.2.20** Subpart T - Wet Process Phosphoric Acid Plants. *(Adopted 6/9/1976.)*
- 13.2.21** Subpart U - Superphosphoric Acid Plants. *(Adopted 6/9/1976.)*
- 13.2.22** Subpart V - Diammonium Phosphate Plants. *(Adopted 6/9/1976.)*
- 13.2.23** Subpart W - Triple Superphosphate Plants. *(Adopted 6/9/1976.)*
- 13.2.24** Subpart X - Granular Triple Superphosphate Storage Facilities. *(Adopted 6/9/1976.)*
- 13.2.25** Subpart Y - Coal Preparation and Processing Plants. *(Adopted 6/9/1976.)*
- 13.2.26** Subpart Z - Ferralloy Production Facilities. *(Adopted 2/10/1982.)*
- 13.2.27** Subpart AA - Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983. *(Adopted 6/9/1976.)*
- 13.2.27(a)** Subpart AAa - Steel Plants: Electric Arc Furnaces and Argon - Oxygen Decarburization Vessels Constructed After August 17, 1983. *(Adopted 4/8/1987.)*
- 13.2.28** Subpart BB - Kraft Pulp Mills. *(Adopted 2/10/1982.)*
- 13.2.28(a)** Subpart BBa – Standards of Performance for Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction or Modification Commenced After May 23, 2013. *(Adopted 5/11/2016.)*
- 13.2.29** Subpart CC - Glass Manufacturing Plants. *(Adopted 4/8/1987.)*
- 13.2.30** Subpart DD - Grain Elevators. *(Adopted 6/9/1976.)*
- 13.2.31** Subpart EE - Surface Coating of Metal Furniture. *(Adopted 4/10/1985.)*

- 13.2.32** Reserved.
- 13.2.33** Subpart GG - Stationary Gas Turbines. *(Adopted 2/10/1982.)*
- 13.2.34** Subpart HH - Lime Manufacturing Plants. *(Adopted 4/8/1987.)*
- 13.2.35** Reserved.
- 13.2.36** Reserved.
- 13.2.37** Subpart KK - Lead-Acid Battery Manufacturing Plants. *(Adopted 4/10/1985.)*
- 13.2.37(a)** Subpart KKa – Lead Acid Battery Manufacturing Plants for Which Construction, Modification or Reconstruction Commenced After February 23, 2022. *(Adopted 8/14/2024.)*
- 13.2.38** Subpart LL - Metallic Mineral Processing Plants. *(Adopted 4/10/1985.)*
- 13.2.39** Subpart MM - Automobile and Light-Duty Truck Surface Coating Operations. *(Adopted 2/10/1982.)*
- 13.2.39(a)** Subpart MMA – Automobile and Light Duty Truck Surface Coating Operations for which Construction, Modification or Reconstruction Commenced After May 18, 2022. *(Adopted 8/14/2024.)*
- 13.2.40** Subpart NN - Phosphate Rock Plants. *(Adopted 4/10/1985.)*
- 13.2.41** Reserved.
- 13.2.42** Subpart PP - Ammonium Sulfate Manufacturing. *(Adopted 2/10/1982.)*
- 13.2.43** Subpart QQ - Graphic Arts Industry: Publication Rotogravure Printing. *(Adopted 4/10/1985.)*
- 13.2.44** Subpart RR - Pressure Sensitive Tape and Label Surface Coating Industry. *(Adopted 4/10/1985.)*
- 13.2.45** Subpart SS - Industrial Surface Coating - Large Appliances. *(Adopted 4/10/1985.)*
- 13.2.46** Subpart TT - Metal Coil Surface Coating Operations. *(Adopted 4/10/1985.)*
- 13.2.47** Subpart UU - Asphalt Processing and Asphalt Roofing Manufacture. *(Adopted 4/10/1985.)*
- 13.2.48** Subpart VV - Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry (SOCMI) for which Construction, Reconstruction, or Modification Commenced After January 15, 1981 and on or Before November 7, 2006. *(Adopted 4/8/1987.)*
- 13.2.48(a)** Subpart VVa – Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for which Construction, Reconstruction, or Modification Commenced After November 7, 2006. *(Adopted 11/12/2008.)*
- 13.2.49** Subpart WW - Beverage Can Surface Coating Industry. *(Adopted 4/10/1985.)*
- 13.2.50** Subpart XX - Bulk Gasoline Terminals. *(Adopted 4/8/1987.)*
- 13.2.51** Reserved.
- 13.2.52** Reserved.
- 13.2.53** Reserved.
- 13.2.54** Subpart BBB - Rubber Tire Manufacturing Industry. *(Adopted 2/8/1989.)*
- 13.2.55** Reserved.
- 13.2.56** Subpart DDD - Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry. *(Adopted 9/11/1991.)*
- 13.2.57** Reserved.
- 13.2.58** Subpart FFF - Flexible Vinyl and Urethane Coating and Printing. *(Adopted 4/8/1987.)*
- 13.2.59** Subpart GGG - Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983 and on or Before November 7, 2006. *(Adopted 4/10/1985.)*

- 13.2.59(a)** Subpart GGGa - Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006. *(Adopted 11/12/2008.)*
- 13.2.60** Subpart HHH - Synthetic Fiber Production Facilities. *(Adopted 4/10/1985.)*
- 13.2.61** Subpart III - VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. *(Adopted 3/11/1998.)*
- 13.2.62** Subpart JJJ - Petroleum Dry Cleaners. *(Adopted 4/10/1985.)*
- 13.2.63** Subpart KKK - Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. *(Adopted 4/8/1987.)*
- 13.2.64** Subpart LLL - Standards of Performance for SO₂ Emissions From Onshore Natural Gas Processing for which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011. *(Adopted 4/8/1987.)*
- 13.2.65** Reserved.
- 13.2.66** Subpart NNN - VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. *(Adopted 12/8/1993.)*
- 13.2.67** Subpart OOO - Nonmetallic Mineral Processing Plants. *(Adopted 4/8/1987.)*
- 13.2.68** Subpart PPP - Wool Fiberglass Insulation Manufacturing Plants. *(Adopted 4/8/1987.)*
- 13.2.69** Subpart QQQ - VOC Emissions from Petroleum Refinery Wastewater Systems. *(Adopted 10/10/1990.)*
- 13.2.70** Subpart RRR - Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. *(Adopted 1/10/1996.)*
- 13.2.71** Subpart SSS - Magnetic Tape Coating Facilities. *(Adopted 10/10/1990.)*
- 13.2.72** Subpart TTT - Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines. *(Adopted 10/10/1990.)*
- 13.2.72(a)** Subpart TTTa – Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines for Which Construction, Reconstruction or Modification Commenced After June 21, 2022. *(Adopted 8/14/2024.)*
- 13.2.73** Subpart UUU - Calciners and Dryers in Mineral Industries. *(Adopted 12/8/1993.)*
- 13.2.74** Subpart VVV - Polymeric Coating of Supporting Substrates Facilities. *(Adopted 10/10/1990.)*
- 13.2.75** Subpart WWW - Municipal Solid Waste Landfills. *(Adopted 3/11/1998.)*
- 13.2.76** Subpart XXX – Municipal Solid Waste Landfills That Commenced Construction, Reconstruction or Modification after July 17, 2014. *(Adopted 8/14/2024.)*
- 13.2.77** Reserved.
- 13.2.78** Reserved.
- 13.2.79** Subpart AAAA – Small Municipal Waste Combustion Units for Which Construction is Commenced after August 30, 1999 or for Which Modification or Reconstruction is Commenced after June 6, 2001. *(Adopted 5/8/2002.)*
- 13.2.80** Reserved.
- 13.2.81** Subpart CCCC – Commercial and Industrial Solid Waste Incineration Units. *(Adopted 5/8/2002.)*
- 13.2.82** Reserved.
- 13.2.83** Reserved.
- 13.2.84** Reserved.
- 13.2.85** Reserved.
- 13.2.86** Reserved.

- 13.2.87** Subpart IIII – Stationary Compression Ignition Internal Combustion Engines. *(Adopted 5/14/2008.)*
- 13.2.88** Subpart JJJJ – Stationary Spark Ignition Internal Combustion Engines. *(Adopted 5/12/2010.)*
- 13.2.89** Subpart KKKK – Stationary Combustion Turbines. *(Adopted 5/14/2008.)*
- 13.2.90** Subpart LLLL – New Sewage Sludge Incineration Units. *(Adopted 5/8/2013.)*
- 13.2.91** Subpart OOOO – Crude Oil and Natural Gas Production, Transmission and Distribution. *(Adopted 5/8/2013.)*
- 13.2.91(a)** Subpart OOOOa – Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced after September 18, 2015. *(Adopted 8/14/2024.)*
- 13.2.91(b)** Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022. *(Adopted 8/14/2024.)*
- 13.2.92** Reserved.
- 13.2.93** Reserved.
- 13.2.94** Reserved.
- 13.2.95** Reserved.
- 13.2.96** Subpart TTTT – Greenhouse Gas Emissions from Electric Generating Units. *(Adopted 8/14/2024.)*
- 13.2.96(a)** Subpart TTTTa – Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units. *(Adopted 8/14/2024.)*

13.3 Appendices to 40 CFR 60.

- 13.3.1** Appendix A - Reference Method. *(Adopted 2/8/1989.)*
- 13.3.2** Appendix B - Performance Specifications. *(Adopted 2/8/1989.)*
- 13.3.3** Appendix F - Quality Assurance Procedures. *(Adopted 2/8/1989.)*
- 13.3.4** Appendix K – Determination of Volatile Organic Compound and Greenhouse Gas Leaks Using Optical Gas Imaging. *(Adopted 8/14/2024)*

13.4 Word or Phrase Substitutions.

In all the standards designated in Part 13.2 substitute: (Recodified from 13.3 on February 8, 1989).

- 13.4.1** Health Officer for Administrator. (Recodified from 13.3.1 on February 8, 1989).
- 13.4.2** Department for U. S. Environmental Protection Agency (except in references). (Recodified from 13.3.2 on February 8, 1989).

CHAPTER 14 – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

(Adopted June 9, 1976; Revised February 10, 1982; April 10, 1985; April 8, 1987; February 8, 1989; October 10, 1990; May 8, 1991; September 11, 1991; October 14, 1992; December 8, 1993; January 10, 1996; March 11, 1998; December 9, 1998; October 13, 1999; June 14, 2000; and November 8, 2000; May 2, 2001; May 8, 2002; March 12, 2003; November 12, 2003 June 15, 2005; May 10, 2006; June 13, 2007; May 14, 2008; November 12, 2008; May 13, 2009; May 12, 2010; September 14, 2011; November 14, 2012; May 8, 2013; May 11, 2016; and August 14, 2024.)

14.1 General.

14.1.1 The Environmental Protection Agency Regulations, and the Appendices applicable thereto, governing Hazardous Air Pollutants, 40 CFR 61 and Appendices, designated in Parts 14.2 and 14.3 and 40 CFR 63, and Appendices designated in Parts 14.5 and 14.6 are incorporated by reference as they exist in 40 CFR 61 (July 1, 2024) , and 40 CFR 63 (July 1, 2024), including all amendments to each Subpart until that date unless specifically excluded, as amended by the word or phrase substitutions given in Part 14.4. References for specific documents containing the complete text of subject regulations are given in Appendix C to these Regulations. Authorities which are not delegable to the state are also listed in Appendix C.

[NOTE: The standards pertaining to the Consolidated Federal Air Rule are located in Chapter 14A.]

14.1.1(a) The materials incorporated by reference are available for purchase or inspection at the Jefferson County Department of Health at 1400 6th Avenue South, Birmingham, Alabama 35233.

14.1.2 In the event of any conflict between the regulations contained in this Chapter and regulations contained in other chapters, the more stringent provision will take precedence.

14.1.3 Definitions. For purposes of this chapter, the definitions listed in 40 CFR 61.02, Subpart A will apply in Parts 14.2 and 14.3 and the definitions listed in 40 CFR 63.2, Subpart A will apply in Parts 14.5 and 14.6.

14.2 Designated Emission Standards: National Emission Standards for Hazardous Air Pollutants located at 40 CFR 61.

14.2.1 Subpart A – General Provisions. *(Adopted 6/14/2000.)*

14.2.2 Subpart C - Beryllium. *(Adopted 6/9/1976.)*

14.2.3 Subpart D - Beryllium Rocket Motor Firing. *(Adopted 6/9/1976.)*

14.2.4 Subpart E - Mercury. *(Adopted 6/9/1976.)*

14.2.5 Subpart F - Vinyl Chloride. *(Adopted 2/10/1982.)*

14.2.6 Reserved.

14.2.7 Reserved.

14.2.8 Reserved.

14.2.9 Subpart J – Equipment Leaks (Fugitive Emission Sources) of Benzene. *(Adopted 4/10/1985.)*

14.2.10 Reserved.

14.2.11 Subpart L - Benzene Emissions from Coke By-Product Recovery Plants. *(Adopted 10/10/1990.)*

14.2.12 Subpart M – Asbestos. *(Adopted 4/10/1985.)*

14.2.12(a) Certification of Asbestos Abatement Contractor *(Adopted 9/11/1991.)*

14.2.12(a)(1) Any person, firm, organization, or corporation who is the owner or operator of any asbestos removal project for which notification is required pursuant to the requirements of Section 14.2.12 shall ensure that the parties executing the asbestos removal project are certified by the Alabama Department of Environmental Management.

14.2.13 Subpart N - Inorganic Arsenic Emissions from Glass Manufacturing Plants. *(Adopted 4/8/1987.)*

14.2.14 Subpart O - Inorganic Arsenic Emissions from Primary Copper Smelters. *(Adopted 4/8/1987.)*

14.2.15 Subpart P - Inorganic Arsenic Emission from Arsenic Trioxide and Metallic Arsenic Production Facilities. *(Adopted 4/8/1987.)*

- 14.2.16** Reserved.
- 14.2.17** Reserved.
- 14.2.18** Reserved.
- 14.2.19** Reserved.
- 14.2.20** Reserved.
- 14.2.21** Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources). *(Adopted 4/10/1985.)*
- 14.2.22** Reserved.
- 14.2.23** Reserved.
- 14.2.24** Subpart Y - Benzene Emissions from Benzene Storage Vessels. *(Adopted 10/10/1990.)*
- 14.2.25** Reserved.
- 14.2.26** Reserved.
- 14.2.27** Subpart BB - Benzene Emissions from Benzene Transfer Operations. *(Adopted 10/10/1990.)*
- 14.2.28** Reserved.
- 14.2.29** Reserved.
- 14.2.30** Reserved.
- 14.2.31** Subpart FF – Benzene Waste Operations. *(Adopted 10/10/1990.)*

14.3 Appendices to 40 CFR 61.

- 14.3.1** Appendix B - Test Methods. *(Adopted 2/8/1989.)*

14.4 Word or Phrase Substitutions.

In all of the standards designated in Parts 14.2 and 14.5 substitute:

- 14.4.1** Health Officer for Administrator. (Recodified from 14.3.1 on February 8, 1989).

- 14.4.2** Board of Health for U.S. Environmental Protection Agency (except in references).

14.5 National Emission Standards for Hazardous Air Pollutants for Source Categories located at 40 CFR 63.

- 14.5.1** Subpart A – General Provisions *(Adopted 6/14/2000.)*

- 14.5.2** Subpart B - Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, §§112(g) and 112(j) *(Adopted 1/10/1996.)*

[NOTE: The requirements for implementation of §112(g) are found in Part 2.6.]

- 14.5.3** Subpart D - Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants. *(Adopted 1/10/1996.)*

- 14.5.4** Reserved.

- 14.5.5** Subpart F - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (SOCMI). *(Adopted 1/10/1996.)*

- 14.5.6** Subpart G - National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater. *(Adopted 1/10/1996.)*

- 14.5.7** Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. *(Adopted 1/10/1996.)*

- 14.5.8** Subpart I - National Emission Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks. *(Adopted 1/10/1996.)*

- 14.5.9** Reserved.
- 14.5.10** Reserved.
- 14.5.11** Subpart L - National Emission Standards for Coke Oven Batteries. *(Adopted 1/10/1996.)*
- 14.5.12** Subpart M - National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities. *(Adopted 1/10/1996.)*
- 14.5.13** Subpart N - National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. *(Adopted 1/10/1996.)*
- 14.5.14** Subpart O - Ethylene Oxide Emission Standards for Sterilization Facilities. *(Adopted 1/10/1996.)*
- 14.5.15** Reserved.
- 14.5.16** Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers. *(Adopted 1/10/1996.)*
- 14.5.17** Subpart R - National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). *(Adopted 1/10/1996.)*
- 14.5.18** Subpart S – National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. *(Adopted 12/9/1998.)*
- 14.5.19** Subpart T - National Emission Standards for Halogenated Solvent Cleaning. *(Adopted 1/10/1996.)*
- 14.5.20** Subpart U - National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins. *(Adopted 3/11/1998.)*
- 14.5.21** Reserved.
- 14.5.22** Subpart W - National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production. *(Adopted 1/10/1996.)*
- 14.5.23** Subpart X - National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting. *(Adopted 3/11/1998.)*
- 14.5.24** Subpart Y - National Emission Standards for Marine Tank Vessel Loading Operations [with the exceptions of those subsections referencing the Valdez Marine Terminal (VMT) in Alaska]. *(Adopted 3/11/1998.)*
- 14.5.25** Reserved.
- 14.5.26** Subpart AA – National Emission Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants. *(Adopted 6/14/2000.)*
- 14.5.27** Subpart BB – National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizer Production Plants. *(Adopted 6/14/2000.)*
- 14.5.28** Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. *(Adopted 3/11/1998.)*
- 14.5.29** Subpart DD - National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. *(Adopted 3/11/1998.)*
- 14.5.30** Subpart EE - National Emission Standards for Magnetic Tape Manufacturing Operations. *(Adopted 1/10/1996.)*
- 14.5.31** Reserved.
- 14.5.32** Subpart GG - National Emission Standards for Aerospace Manufacturing and Rework Facilities. *(Adopted 3/11/1998.)*
- 14.5.33** Subpart HH – National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. *(Adopted 6/14/2000.)*
- 14.5.34** Subpart II - National Emission Standards for Shipbuilding and Ship Repair (Surface Coating). *(Adopted 1/10/1996.)*
- 14.5.35** Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operations. *(Adopted 1/10/1996.)*
- 14.5.36** Subpart KK - National Emission Standards for the Printing and Publishing Industry. *(Adopted 3/11/1998.)*
- 14.5.37** Reserved.

- 14.5.38** Subpart MM – National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills. *(Adopted 5/8/2002.)*
- 14.5.39** Subpart NN – National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing at Area Sources *(Adopted 8/14/2024.)*
- 14.5.40** Subpart OO - National Emission Standards for Tanks - Level 1. *(Adopted 3/11/1998.)*
- 14.5.41** Subpart PP - National Emission Standards for Containers. *(Adopted 3/11/1998.)*
- 14.5.42** Subpart QQ - National Emission Standards for Surface Impoundments. *(Adopted 3/11/1998.)*
- 14.5.43** Subpart RR - National Emission Standards for Individual Drain Systems. *(Adopted 3/11/1998.)*
- 14.5.44** Subpart SS – National Emission Standards Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process. *(Adopted 6/14/2000.)*
- 14.5.45** Subpart TT – National Emission Standards for Equipment Leaks – Control Level 1. *(Adopted 6/14/2000.)*
- 14.5.46** Subpart UU – National Emission Standards for Equipment Leaks – Control Level 2. *(Adopted 6/14/2000.)*
- 14.5.47** Subpart VV National Emission Standards for Oil - Water Separators and Organic - Water Separators. *(Adopted 3/11/1998.)*
- 14.5.48** Subpart WW – National Emission Standards for Storage Vessel (Tanks) – Control Level 2. *(Adopted 6/14/2000.)*
- 14.5.49** Subpart XX – National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations. *(Adopted 11/12/2003.)*
- 14.5.50** Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards. *(Adopted 6/14/2000.)*
- 14.5.51** Reserved.
- 14.5.52** Reserved.
- 14.5.53** Reserved.
- 14.5.54** Subpart CCC – National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants. *(Adopted 6/14/2000.)*
- 14.5.55** Subpart DDD – National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production. *(Adopted 6/14/2000.)*
- 14.5.56** Subpart EEE – National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. *(Adopted 10/13/1999.)*
- 14.5.57** Reserved.
- 14.5.58** Subpart GGG – National Emission Standards for Pharmaceuticals Production. *(Adopted 10/13/1999.)*
- 14.5.59** Subpart HHH – National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. *(Adopted 6/14/2000.)*
- 14.5.60** Subpart III – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production. *(Adopted 10/13/1999.)*
- 14.5.61** Subpart JJJ - National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins. *(Adopted 3/11/1998.)*
- 14.5.62** Reserved.
- 14.5.63** Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. *(Adopted 6/14/2000.)*
- 14.5.64** Subpart MMM – National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production. *(Adopted 6/14/2000.)*

- 14.5.65** Subpart NNN – National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing. *(Adopted 6/14/2000.)*
- 14.5.66** Subpart OOO – National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins. *(Adopted 11/8/2000.)*
- 14.5.67** Subpart PPP – National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production. *(Adopted 6/14/2000.)*
- 14.5.68** Reserved.
- 14.5.69** Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. *(Adopted 11/8/2000.)*
- 14.5.70** Reserved.
- 14.5.71** Reserved.
- 14.5.72** Subpart UUU – National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. *(Adopted 3/12/2003.)*
- 14.5.73** Subpart VVV – National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works. *(Adopted 11/8/2000.)*
- 14.5.74** Reserved.
- 14.5.75** Subpart XXX – National Emission Standards for Hazardous Air Pollutants for Ferroalloys Production: Ferromanganese and Silicomanganese. *(Adopted 6/14/2000.)*
- 14.5.76** Reserved.
- 14.5.77** Reserved.
- 14.5.78** Subpart AAAA – National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. *(Adopted 11/12/2003.)*
- 14.5.79** Reserved.
- 14.5.80** Subpart CCCC – National Emission Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast. *(Adopted 5/8/2002.)*
- 14.5.81** Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. *(Adopted 5/10/2006.)*
- 14.5.82** Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline). *(Adopted 6/15/2005.)*
- 14.5.83** Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing. *(Adopted 6/15/2005.)*
- 14.5.84** Subpart GGGG – National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production. *(Adopted 5/8/2002.)*
- 14.5.85** Subpart HHHH – National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production. *(Adopted 3/12/2003.)*
- 14.5.86** Subpart IIII – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks. *(Adopted 6/15/2005.)*
- 14.5.87** Subpart JJJJ – National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating. *(Adopted 11/12/2003.)*
- 14.5.88** Subpart KKKK – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans. *(Adopted 6/15/2005.)*
- 14.5.89** Reserved.

- 14.5.90** Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products. *(Adopted 6/15/2005.)*
- 14.5.91** Subpart NNNN – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances. *(Adopted 11/12/2003.)*
- 14.5.92** Subpart OOOO – National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles. *(Adopted 6/15/2005.)*
- 14.5.93** Subpart PPPP – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products. *(Adopted 6/15/2005.)*
- 14.5.94** Subpart QQQQ – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products. *(Adopted 6/15/2005.)*
- 14.5.95** Subpart RRRR – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture. *(Adopted 6/15/2005.)*
- 14.5.96** Subpart SSSS – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coils. *(Adopted 11/12/2003.)*
- 14.5.97** Reserved.
- 14.5.98** Reserved.
- 14.5.99** Subpart VVVV – National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing. *(Adopted 5/8/2002.)*
- 14.5.100** Subpart WWWW – National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production. *(Adopted 11/12/2003.)*
- 14.5.101** Subpart XXXX – National Emission Standards for Hazardous Air Pollutants: Rubber Tire Manufacturing. *(Adopted 11/12/2003.)*
- 14.5.102** Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. *(Adopted 6/15/2005.)*
- 14.5.103** Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. *(Adopted 6/15/2005.)*
- 14.5.104** Subpart AAAAA – National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. *(Adopted 6/15/2005.)*
- 14.5.105** Subpart BBBBB – National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing. *(Adopted 6/15/2005.)*
- 14.5.106** Subpart CCCCC – National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks. *(Adopted 11/12/2003.)*
- 14.5.107** Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. *(Adopted 5/11/2016.)*
- 14.5.108** Subpart EEEEE – National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries. *(Adopted 6/15/2005.)*
- 14.5.109** Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities. *(Adopted 6/15/2005.)*
- 14.5.110** Subpart GGGGG – National Emission Standards for Hazardous Air Pollutants: Site Remediation. *(Adopted 6/15/2005.)*
- 14.5.111** Subpart HHHHH – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing. *(Adopted 6/15/2005.)*
- 14.5.112** Subpart IIIII – National Emission Standards for Hazardous Air Pollutants: Mercury Emissions From Mercury Cell Chlor-Alkali Plants. *(Adopted 6/15/2005.)*
- 14.5.113** Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Ceramics Manufacturing. *(Adopted 8/14/2024.)*

- 14.5.114** Subpart KKKKK – National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing. *(Adopted 8/14/2024.)*
- 14.5.115** Subpart LLLLL – National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing. *(Adopted 11/12/2003.)*
- 14.5.116** Reserved.
- 14.5.117** Subpart NNNNN – National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production. *(Adopted 11/12/2003.)*
- 14.5.118** Reserved.
- 14.5.119** Subpart PPPPP – National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands. *(Adopted 6/15/2005.)*
- 14.5.120** Subpart QQQQQ – National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities. *(Adopted 6/15/2005.)*
- 14.5.121** Subpart RRRRR – National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing. *(Adopted 6/15/2005.)*
- 14.5.122** Reserved.
- 14.5.123** Subpart TTTTT – National Emission Standards for Hazardous Air Pollutants for Primary Magnesium Refining. *(Adopted 6/15/2005.)*
- 14.5.124** Subpart UUUUU – National Emission Standards for Hazardous Air Pollutants: for Coal- and Oil-Fired Electric Utility Steam Generating Units. *(Adopted 5/8/2013.)*
- 14.5.125** Reserved.
- 14.5.126** Reserved.
- 14.5.127** Reserved.
- 14.5.128** Subpart YYYYY – National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities. *(Adopted 5/12/2010.)*
- 14.5.129** Subpart ZZZZZ – National Emission Standards for Hazardous Air Pollutants for Steel and Iron Foundries Area Sources. *(Adopted 5/12/2010.)*
- 14.5.130** Reserved.
- 14.5.131** Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants and Pipeline Facilities. *(Adopted 5/12/2010.)*
- 14.5.132** Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. *(Adopted 5/12/2010.)*
- 14.5.133** Subpart DDDDDD – National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources. *(Adopted 5/14/2008.)*
- 14.5.134** Subpart EEEEE – National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting Area Sources. *(Adopted 5/14/2008.)*
- 14.5.135** Subpart FFFFFF – National Emission Standards for Hazardous Air Pollutants for Secondary Copper Smelting Area Sources. *(Adopted 5/14/2008.)*
- 14.5.136** Subpart GGGGGG – National Emission Standards for Hazardous Air Pollutants for Primary Nonferrous Metals Area Sources – Zinc, Cadmium, and Beryllium. *(Adopted 5/14/2008.)*
- 14.5.137** Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (including Autobody Refinishing). *(Adopted 5/12/2010.)*
- 14.5.138** Reserved.

- 14.5.139**Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources. *(Adopted 5/11/2016.)*
- 14.5.140**Reserved.
- 14.5.141**Subpart LLLLLL – National Emission Standards for Hazardous Air Pollutants for Acrylic and Modacrylic Fibers Production Area Sources. *(Adopted 11/14/2012.)*
- 14.5.142**Subpart MMMMMM – National Emission Standards for Hazardous Air Pollutants for Carbon Black Production Area Sources. *(Adopted 11/14/2012.)*
- 14.5.143**Reserved.
- 14.5.144**Subpart OOOOOO – National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources. *(Adopted 8/14/2024.)*
- 14.5.145**Subpart PPPPPP – National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources. *(Adopted 8/14/2024.)*
- 14.5.146**Subpart QQQQQQ – National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources. *(Adopted 9/14/2011.)*
- 14.5.147**Reserved.
- 14.5.148**Reserved.
- 14.5.149**Subpart TTTTTT – National Emission Standards for Hazardous Air Pollutants for Secondary Nonferrous Metals Processing Area Sources. *(Adopted 11/14/2012.)*
- 14.5.150**Reserved.
- 14.5.151**Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources *(Adopted 5/11/2016.)*
- 14.5.152**Subpart WWWWWW – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations *(Adopted 5/11/2016.)*
- 14.5.153**Subpart XXXXXX – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories *(Adopted 5/11/2016.)*
- 14.5.154**Subpart YYYYYY – National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities. *(Adopted 11/14/2012.)*
- 14.5.155**Subpart ZZZZZZ – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries. *(Adopted 11/14/2012.)*
- 14.5.156**Subpart AAAAAA – National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing. *(Adopted 9/14/2011.)*
- 14.5.157**Reserved.
- 14.5.158**Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing. *(Adopted 9/14/2011.)*
- 14.5.159**Subpart DDDDDD – National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing. *(Adopted 9/14/2011.)*
- 14.5.160**Reserved.
- 14.5.161**Reserved.
- 14.5.162**Reserved.
- 14.5.163**Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production. *(Adopted 5/8/2013.)*
- 14.6 Appendices to 40 CFR 63.**

- 14.6.1** Appendix A – Test Methods Pollutant Measurement Methods From Various Waste Media. *(Adopted 1/10/1996.)*
- 14.6.2** Appendix B – Sources Defined for Early Reduction Provisions. *(Adopted 1/10/1996.)*
- 14.6.3** Appendix C – Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit. *(Adopted 1/10/1996.)*
- 14.6.4** Appendix D – Alternative Validation Procedure for EPA Waste and Wastewater Methods. *(Adopted 3/11/1998.)*
- 14.6.5** Appendix E – Monitoring Procedure for Nonthoroughly Mixed Open Biological Treatment System Systems at Kraft Pulp Mills Under Unsafe Sampling Conditions. *(Adopted 5/8/2002.)*

CHAPTER 14A – CONSOLIDATED FEDERAL RULE REGARDING NEW SOURCE PERFORMANCE STANDARDS AND NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

(Adopted May 8, 2002; Revised November 12, 2003; November 12, 2008; May 11, 2016; and August 14, 2024)

14A.1 General

14A.1.1 The Environmental Protection Agency Regulations designated in Part 14A.2 are incorporated by reference as they exist in 40 CFR 65 (July 1, 2024), as amended by the word or phrase substitutions given in Part 14A.3, except for the provisions found in 65.14, which are excluded. References for specific documents containing the complete text of subject regulations are given in Appendix C to these Regulations. Authorities that are not delegable to the state are also listed in Appendix C.

14A.1.1(a) The materials incorporated by reference are available for purchase and inspection at the Department's offices at 1401 Sixth Avenue South, Birmingham, Alabama 35202.

14A.1.2 In the event of any conflict between the regulations contained in this Chapter and regulations contained in other Chapters, the more stringent regulations will take precedence.

14A.1.3 Definitions. For purposes of this Chapter, the definitions listed in 40 CFR §65.2, Subpart A will apply in Part 14A.2.

14A.2 Designated Emission Standards: Consolidated Federal Air Rule, located at 40 CFR 65.

14A.2.1 Subpart A – General Provisions.

14A.2.2 Reserved.

14A.2.3 Subpart C – Storage Vessels.

14A.2.4 Subpart D – Process Vents.

14A.2.5 Subpart E – Transfer Racks.

14A.2.6 Subpart F – Equipment Leaks.

14A.2.7 Subpart G – Closed Vent Systems, Control Devices, and Routing to a Fuel Gas System or a Process.

14A.3 Word or Phrase Substitutions.

In all of the standards designated in Part 14A.2 substitute:

14A.3.1 Director for Administrator.

14A.3.2 Department for U. S. Environmental Protection Agency (except in references).

CHAPTER 15 – APPLICATION FEES

(Adopted April 10, 1985; Revised April 8, 1987; and November 14, 1990; December 8, 1993; May 8, 2002; November 12, 2003; March 14, 2007; and May 14, 2008; November 14, 2012; and May 11, 2016.)

15.1 Applicability.

The provisions of this Chapter shall apply to any person making application to the Board of Health for issuance, reissuance or modification of a permit, except as provided in Part 15.3.

15.2 Definitions.

The words or phrases used in this Chapter shall have the meanings provided in the rules and regulations applicable to the particular application involved unless the word or phrase is defined in this Section. For purposes of this Chapter, the following words or phrases shall have the following meanings:

15.2.1 "greenfield site" shall mean a new development or the initial operation of a new facility or a facility or operation not previously permitted. A new gasoline dispensing facility equal to or less than 10,000 gallons storage capacity shall not be considered a greenfield site for permitting fee purposes.

15.3 Exemptions.

No fee is required for making the following applications:

15.3.1 applications for a permit modification to correct clerical, typographical or calculation errors.

15.3.2 applications to replace existing gasoline storage tanks with new tanks of storage capacity equal to or less than 10,000 gallons at a gasoline dispensing facility which already has a valid Jefferson County Department of Health Air Permit.

15.3.3 Reserved.

15.4 Permit Application Fees.

15.4.1 Except as provided in Sections 15.3.2 and 15.4.2, any person making application to the Board of Health for the issuance, reissuance or modification of a permit shall be subject to a three-part application fee consisting of the following:

15.4.1(a) a fee of \$895 per application relating to a greenfield site;

15.4.1(b) a fee which shall be the sum of the fees for each applicable type of permit application, and each action deemed necessary to complete evaluation of the application, as specified in the Fee Schedule (Table 15-1); and

15.4.1(c) a public hearing fee of \$4695 if a public hearing relating to the permit application is held.

15.4.2 Any person making application to the Board of Health for modification of a permit to change the name of the permittee only or to transfer the permit only shall be subject to a \$445 fee per application, in addition to an \$85 fee per permit.

15.5 Payment of Fees.

15.5.1 Payment of permit application fees required under Paragraphs 15.4.1 (a) and (b) or Section 15.4.2 shall be included with the permit application. No permit application shall be processed without payment of such fees. Any additional fee determined to be due during the course of the application processing shall be billed to the applicant. Payment of such fee shall be made within thirty days of invoice date. No final decision regarding the permit application shall be made until after payment of such additional fee. Failure to make payment as provided herein shall constitute cause for denial of the permit application.

15.5.2 Any fee required under Paragraph 15.4.1 (c) shall be billed to the applicant. Payment of such fee shall be made within thirty days of the invoice date. No final decision regarding the permit application shall be made until after payment of such fee. Failure to make payment as provided herein shall constitute cause for denial of the permit application.

15.5.3 All fees paid pursuant to the requirements of this Chapter shall be non-refundable.

15.5.4 All fees and remittances shall be made payable to the Jefferson County Board of Health.

**TABLE 15-1
FEE SCHEDULE – AIR QUALITY PERMITS**

Type of Activity Associated with Permit Applications	Fee (Dollars)
Application Submittal Fee (Per Application) – Nonrefundable	410
Non-Attainment Review Submittal Fee (Per Application)	1,340
LAER Determination (Per Permit Per Pollutant)	525
PSD Review (Per Application)	1,340
BACT Determination (Per Pollutant)	525
Plantwide Applicability Limits (PAL) Review (Per Pollutant)	6,575
Certification of Preconstruction Monitoring Data (Per Pollutant) Adequacy Determination of Preconstruction Monitoring Network/Data	4,130
State Regulations Only (Per Permit)	320
NESHAPS Review (Per Permit)	1,555
MACT/112g Determination (Per Pollutant)	525
Non-Criteria Air Pollutant Review (Per Pollutant)	1,055
NSPS Review (Per Permit)	1,555
Modeling Review	10,590
Modeling Protocol Review	1,430
Class 1 Modeling Review	1,430
Emission Inventory Program	810 + 85/Point/Pollutant
Meteorological Data	605
Soil Remediation Plan Review	360
Permit Preparation (Per Permit)	410
Public Comment Period (Per Application)	410
Public Hearing (Per Application)	See Paragraph 15.4.1(c)
Greenfield Site (Per Application)	See Paragraph 15.4.1(a)

CHAPTER 16 - OPERATING PERMIT FEES

(Adopted - December 11, 1991; Revised October 14, 1992; December 8, 1993; January 10, 1996; November 12, 2003; May 11, 2016; and August 14, 2024.)

16.1 Applicability.

The provisions of this Chapter shall apply to any person who operates a stationary source which meets the definition of major source in Section 16.2.5.

16.2 Definitions.

The words or phrases used in this Chapter shall have the meanings provided in the rules and regulations applicable to the particular application involved unless the word or phrase is defined in this Part. For the purposes of this Chapter, the following words or phrases shall have the following meanings:

- 16.2.1** "Actual emissions" means the actual rate of emissions in tons per year of any regulated air pollutant emitted by a stationary source. Actual emissions shall be calculated using the stationary source's actual operating hours, production rates, and in-place control equipment, types of materials processed, stored, or combusted during the calendar year which precedes the year the fees are due by one year.
- 16.2.2** "Affected pollutant" means any of the following pollutants: nitrogen oxides, sulfur oxides measured as sulfur dioxide, volatile organic compounds, or particulate matter.
- 16.2.3** "Consumer price index or CPI" means the average of the Consumer Price Index for all-urban consumers published by the Department of Labor, as of the close of the 12-month period ending on August 31 of each year.
- 16.2.4** "Fugitive emissions" are the emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.
- 16.2.5** "Major source" means any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person or persons under common control belonging to a single major industrial grouping) that is characterized by one of the following categories:
- 16.2.5(a)** Emits or has the potential to emit 10 tons per year or more of any hazardous air pollutant which has been listed in section 112(b) in the Clean Air Act (except radionuclides) or 25 tons per year or more of any combination of such hazardous air pollutants. Emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources for hazardous air pollutants.
- 16.2.5(b)** Emits or has the potential to emit 100 tons per year or more of any regulated air pollutant. The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source unless the source belongs to one of the following categories of stationary source:
- Coal cleaning plants (with thermal dryers)
 - Kraft pulp mills
 - Portland cement plants
 - Primary zinc smelters
 - Iron and steel mills
 - Primary aluminum ore reduction plants
 - Primary copper smelters
 - Municipal incinerators capable of charging more than 250 tons of refuse per day.
 - Hydrofluoric, sulfuric, or nitric acid plants
 - Petroleum refineries
 - Lime plants
 - Phosphate rock processing plants
 - Coke oven batteries
 - Sulfur recovery plants
 - Carbon black plants (furnace process)
 - Primary lead smelters
 - Fuel conversion plants

- Sintering plants
- Secondary metal production plants
- Chemical process plants
- Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input
- Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels. (Revised October 14, 1992.)
- Taconite ore processing plants
- Glass fiber processing plants
- Charcoal production plants
- Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour of heat input
- All other stationary source categories regulated under sections 111 or 112 in the Clean Air Act.

16.2.6 "Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is federally-enforceable.

16.2.7 "Regulated air pollutant" means the following:

16.2.7(a) Nitrogen oxides or any volatile organic compound

16.2.7(b) Any pollutant for which a national ambient air quality standard has been promulgated.

16.2.7(c) Any pollutant that is subject to any standard promulgated under section 111 of the Clean Air Act.

16.2.7(d) any pollutant subject to a standard promulgated under section 112 or the requirements established under section 112 of the Act including sections 112(g), and (j) of the Act, including the following:

16.2.7(d)(1) any pollutant subject to requirements under section 112(j) of the Act. If the Administrator fails to promulgate a standard by the date established pursuant to section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to section 112(e) of the Act; and

16.2.7(d)(2) any pollutant for which the requirements of section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to section 112(g)(2) requirement.

16.2.8 "Stationary source" means any activity or piece of equipment at a building, structure, facility, or installation that emits or may emit any air pollutant.

16.3 Exemptions.

16.3.1 Stationary sources which are not major sources as defined in Section 16.2.5 are exempt from annual fee payment under Chapter 16.

16.3.2 Fugitive emissions shall be exempt from the fees paid in Schedules A and B of this Chapter (calendar years 1991 through 1993 only). This provision does not apply to fees beginning with calendar year 1994.

16.4 Fee Schedule.

16.4.1 Major sources which have actual emissions of 1000 tons or more per year of an affected pollutant in the calendar years 1991, 1992 and 1993 shall pay permit fees to the Department according to Schedule A of this Chapter for pollutants which are limited by the Jefferson County Board of Health Air Pollution Control Rules and Regulations or by a permit condition developed pursuant to these requirements.

16.4.2 Major sources which have actual emissions of 100 tons or more per year but less than 1000 tons per year of an affected pollutant in the calendar years 1992 and 1993 shall pay permit fees to the Department according to Schedule B of this Chapter for pollutants which are limited by the Jefferson County Board of Health Air Pollution Control Rules and Regulations or by a permit condition developed pursuant to these requirements.

16.4.3 Beginning in the calendar year 1995, fees will be due on May 1 for every source operating under a permit issued pursuant to Chapter 18 at the rate of \$25 per ton plus the difference in the Consumer Price Index (CPI) of the year the fees were assessed and the CPI of 1989 for each regulated air pollutant except carbon monoxide, as defined in section 16.2.7, for the actual emissions during the previous calendar year, except as provided at Section 16.4.8.

- 16.4.4** Emissions from a major source of any pollutant subject to fees in this chapter which are emitted at a rate greater than 4000 tons per year shall be defined as 4000 tons per year for the purposes of assessing fees for each said pollutant.
- 16.4.5** Emissions of a regulated air pollutant shall not be counted more than once in determining fees.
- 16.4.6** Facilities having paid fees for 1991 and/or, 1992, and/or 1993 emissions as assessed according to Fee Schedules A or B shall be given credit on the amount owed in the following five years (1995-1999), until the sum of the amount paid in 1992, 1993, and 1994 equals the amount of credit allowed. The fee credits shall be subtracted from the total fees due the Department after annual assessment at \$25.00 per ton plus CPI. The annual total due to the Department shall be calculated as follows:
- 1995 fees assessed minus 30% 1992-1994 Total
 - 1996 fees assessed minus 25% 1992-1994 Total
 - 1997 fees assessed minus 20% 1992-1994 Total
 - 1998 fees assessed minus 15% 1992-1994 Total
 - 1999 fees assessed minus 10% 1992-1994 Total
- 16.4.7** If at the end of any fiscal year, the amount of operating permit fees carried over in the Air Program budget exceeds the amount of the Air budget for that fiscal year, the operating permit fees shall be reduced the following year.
- 16.4.8** The Department may set a minimum presumptive annual compliance fee for sources holding an operating permit issued pursuant to Chapter 18. Each facility shall be charged the higher of the minimum presumptive annual compliance fee or the emissions-based fee as provided at Section 16.4.3 above. (Adopted May 11, 2016.)
- 16.5 Payment of Fees.**
- 16.5.1** Payment of operating permit fees required under Part 16.4 shall be made on or before May 1 of each year beginning in 1992.
- 16.5.2** Failure to make payment of fees within 30 days of the date the fees are due as provided in Section 16.5.1 shall cause the assessment of a late fee of 3% (of the original fee) per month or fraction thereof.
- 16.5.3** Failure to submit payment as required in this Chapter shall be cause for revocation of air and or operating permit(s).
- 16.5.4** All fees paid pursuant to the requirements of this Chapter shall be non-refundable.
- 16.5.5** All fees and remittances shall be made payable to the Jefferson County Department of Health.
- 16.5.6** Within 60 days of payment of the fees, the Department shall advise the source that it agrees with the actual emission estimate used to calculate the fees, disagrees with the actual emission estimate used to assess the fees or needs additional information. When the Department sends a letter agreeing with actual emission estimates, it may not reassess the fees for the year in question unless it determines that the source intentionally provided erroneous information.
- 16.5.7** All fees generated by this program will be used to directly and indirectly support the Air Program.

SCHEDULE A

Due Date	Fee Assessment
May 1, 1992	\$7.70 per ton of actual emission per affected pollutant emitted at a rate of 1,000 tons per year or more during the calendar year 1991.
May 1, 1993	\$12.00 per ton of actual emission per affected pollutant emitted at a rate of 1,000 tons per year or more during the calendar year 1992.
May 1, 1994	\$18.30 per ton of actual emission per affected pollutant emitted at a rate of 1,000 tons per year or more during the calendar year 1993.

SCHEDULE B

Due Date	Fee Assessment
May 1, 1993	\$15.70 per ton of actual emission per affected pollutant emitted at a rate of 1,000 tons per year or more during the calendar year 1992.
May 1, 1994	\$22.40 per ton of actual emission per affected pollutant emitted at a rate of 1,000 tons per year or more during the calendar year 1993.

CHAPTER 17 – SYNTHETIC MINOR OPERATING PERMITS

(Adopted December 8, 1993; Revised October 13, 1999; November 8, 2000; May 8, 2013; May 11, 2016; and August 14, 2024)

17.1 Definitions

17.1.1 For the purpose of this Chapter only, the following terms will have the meanings ascribed in this Part.

17.1.1(a) "ACT" shall mean the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.

17.1.1(b) "Air Permit" shall mean any permit issued pursuant to Chapter 2 of these regulations.

17.1.1(c) "Department" shall mean the Jefferson County Department of Health.

17.1.1(d) "Operating Permit" shall mean any permit issued pursuant to Chapter 18 of these regulations.

17.1.1(e) "Potential Major Source" shall mean any major source as defined in Part 18.1 of Chapter 18 of these regulations whose actual emissions are less than the major source thresholds.

17.1.1(f) "Stationary Source" shall mean any building, structure, facility, or installation that emits or may emit any regulated air pollutant as defined in Part 18.1 of Chapter 18 or any pollutant listed in Appendix D of these regulations.

17.1.1(g) "Synthetic Minor Operating Permit" shall mean a permit which restricts a source's potential to emit so that it is a Synthetic Minor Source.

17.1.1(h) "Synthetic Minor Source" shall mean a source whose potential to emit is restricted to less than a major source threshold as defined in Part 18.1 of Chapter 18 of these regulations.

17.2 General Provisions.

17.2.1 Any Potential Major Source operating without an Air Permit, an Operating Permit or a Synthetic Minor Operating Permit may continue to operate (or may restart) only if its owner or operator obtains a Synthetic Minor Operating Permit or an Operating Permit prior to a date to be set by the Health Officer (or prior to restarting).

17.2.2 Display of Synthetic Minor Operating Permit. A person who has been granted a Synthetic Minor Operating Permit for any article, machine, equipment, or other contrivance shall keep such permit under file or on display at all times at the site where the article, machine, equipment, or other contrivance is located and will make such a permit readily available for inspection by any and all persons who may request to see it.

17.2.3 The Health Officer shall have the authority to decide cases where an article, machine, equipment or other contrivance is not clearly subject to nor exempt from the application of this Chapter. In addition, the Health Officer may rule that a particular article, machine, equipment, or other contrivance is subject to the application of this Chapter even though it is exempt from the system according to Part 17.3 of this Chapter. The operator or builder of such an article, machine, equipment, or other contrivance may appeal the Health Officer's classification to the Board of Health, which shall overrule the Health Officer only if it is shown that he acted arbitrarily and contrary to the purposes of the Act.

17.2.4 The Department may issue a Synthetic Minor Operating Permit subject to conditions which will bring the operation of any article, machine, equipment, or other contrivance within the standards of Paragraph 17.2.8(a) of this Chapter in which case the conditions shall be specified in writing. Commencing construction or operation under such a Synthetic Minor Operating Permit shall be deemed acceptance of all the conditions specified. The Department shall issue a Synthetic Minor Operating Permit with revised conditions upon receipt of a new application, if the applicant demonstrates that the article, machine, equipment, or other contrivance can operate within the standards of Paragraph 17.2.8(a) of this Chapter under the revised conditions.

17.2.5 Provisions of Sampling and Testing Facilities. A person operating or using any article, machine, equipment or other contrivance for which these rules and regulations require a permit shall provide and maintain such sampling and testing facilities as specified in the Synthetic Minor Operating Permit.

17.2.6 Transfer. A Synthetic Minor Operating Permit shall not be transferable whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another.

17.2.7 Synthetic Minor Operating Permit Requirements to Alabama Department of Environmental Management.

17.2.7(a) The Health Officer shall provide the Director of the Alabama Department of Environmental Management with the opportunity to review all Synthetic Minor Operating Permit Applications, the analysis of the Synthetic Minor

Operating Permits, and the proposed Synthetic Minor Operating Permit conditions at least ten days prior to date of issuance of an Synthetic Minor Operating Permit; except those permits, as agreed upon between the Health Officer and the Director of Alabama Department of Environmental Management that may be exempt from the ten-day period and provided files are maintained on all permits exempted from review by the Alabama Department of Environmental Management.

17.2.7(b) The Jefferson County Department of Health (Air Division) shall provide the Director of Alabama Department of Environmental Management a copy of preliminary determinations and public comment notices for all Synthetic Minor Operating Permits issued pursuant to this Chapter at the same time the notice is forwarded for publication in the newspaper.

17.2.8 General Standards for Granting Synthetic Minor Operating Permits.

17.2.8(a) The Department shall deny a Synthetic Minor Operating Permit if the applicant does not show that every article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment, that it may be expected to operate without emitting or without causing to be emitted air contaminants in violation of the Jefferson County Board of Health Air Pollution Control Rules and Regulations. Issuance of a Synthetic Minor Operating Permit shall not relieve the permittee from complying with any other applicable requirements not contained in these regulations.

17.2.8(b) The Department shall deny a Synthetic Minor Operating Permit if the applicant does not present, in writing, a plan whereby the emission of air contaminants by every article, machine, equipment, or other contrivance described in the permit application, will be reduced during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency in accordance with the provisions of Chapter 4, where such a plan is required.

17.2.8(c) Before a Synthetic Minor Operating Permit is granted, the Health Officer may require the applicant to provide and maintain such facilities as are necessary for sampling and testing purposes in order to secure information that will disclose the nature, extent, quantity or degree of air contaminants, discharged into the atmosphere from the article, machine, equipment, or other contrivance described in the Synthetic Minor Operating Permit. In the event of such a requirement, the Department shall notify the applicant in writing of the required size, number, and location of the sampling platform; the access to the sampling platform; and the utilities for operating and sampling and testing equipment. The Department may also require the applicant to install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods, at such locations, intervals, and procedures as may be specified; and provide such information as the Department may require.

17.2.8(d) Before acting on an application for a Synthetic Minor Operating Permit, the Department may require the applicant to furnish further information or further plans or specifications.

17.2.8(e) If the Department finds that the article, machine, or other contrivance has been constructed not in accordance with the Synthetic Minor Operating Permit application, and if the changes noted are of a substantial nature in that the amount of air contaminants emitted by the article, machine, equipment, or other contrivance may be increased, or in that the effect is unknown, then it shall revoke the Synthetic Minor Operating Permit. The Department shall not accept any further application for a Synthetic Minor Operating Permit until the article, machine, equipment, or other contrivance has been reconstructed in accordance with said Synthetic Minor Operating Permit or until the applicant has proven to the satisfaction of the Department that the change will not cause an increase in the emission of air contaminants.

17.2.8(f) The Department shall deny a Synthetic Minor Operating Permit where it determines that the construction and operation of such Stationary Source will interfere with attaining or maintaining any primary or secondary standard established by Part 1.7. A new Stationary Source or modification will be considered to interfere with attaining or maintaining a standard when such Stationary Source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the National Primary and Secondary Ambient Air Quality Standards, as defined in Part 1.7:

POLLUTANT	AVERAGING TIME				
	ANNUAL	24 hrs	8 hrs	3 hrs	1 hr
SO ₂	1.0 µg/m ³	5 µg/m ³		25 µg/m ³	
PM ₁₀	1.0 µg/m ³	5 µg/m ³			
PM _{2.5}	0.13 µg/m ³	1.2 µg/m ³			
NO ₂	1.0 µg/m ³				
CO			0.5 mg/m ³		2 mg/m ³

- 17.2.8(g)** A determination may be made by the Health Officer to deny a permit application if the applicant operates other permitted facilities or Stationary Sources within the state which are in substantial noncompliance as determined by the Health Officer, until such noncompliance is corrected or if the Health Officer determines that a permit that results in compliance with applicable air pollution control standards could not be issued, or if issued, could not be complied with.
- 17.2.8(h)** Revocation of Synthetic Minor Operating Permits. Any Synthetic Minor Operating Permit granted by the Department may be revoked for any of the following causes:
- 17.2.8(h)(1)** failure to comply with any conditions of the permit;
- 17.2.8(h)(2)** failure to establish and maintain such records, make such reports, install, use and maintain such monitoring equipment or methods; and sample such emissions in accordance with such methods at such locations, intervals and procedures as the Department may prescribe in accordance with Part 1.9.
- 17.2.8(h)(3)** failure to comply with any provisions of any Board of Health administrative order issued concerning the permitted Stationary Source or facility.
- 17.2.8(h)(4)** failure to allow employees of the Department upon proper identification to:
- 17.2.8(h)(4)(i)** enter any premises, at reasonable times, where any article, machine, equipment, or other contrivance described in Part 17.1 is located or in which any records are required to be kept under provisions of the permit and/or these regulations;
- 17.2.8(h)(4)(ii)** have access to and copy any records required to be kept under provisions of the permit and/or these regulations;
- 17.2.8(h)(4)(iii)** inspect any monitoring equipment or practices being maintained pursuant to the permit and/or rules and regulations; and
- 17.2.8(h)(4)(iv)** have access to and sample any discharge of air contaminants resulting directly or indirectly from the operation of any article, machine, equipment, or other contrivance described in Part 17.1.
- 17.2.8(h)(5)** failure to comply with the Jefferson County Board of Health Air Pollution Control Rules and Regulations.
- 17.2.8(h)(6)** for any other cause, after a hearing which establishes, in the judgment of the Department, that continuance of the permit is not consistent with the purpose of the Act or regulations adopted pursuant thereto.
- 17.2.8(h)(7)** failure to pay any fees required by the Regulations or the Jefferson County Department of Health Environmental Health Services Fee Manual. (Adopted May 11, 2016.)

17.2.9 Stack Heights

17.2.9(a) Definitions. For purposes of this Section, the following terms will have the meanings ascribed in this Paragraph:

- 17.2.9(a)(1)** "Emission limitation" and "emission standard" mean a requirement, established by Jefferson County Board of Health or the EPA Administrator, which limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.
- 17.2.9(a)(2)** "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.
- 17.2.9(a)(3)** "A stack in existence" means that the owner or operator had (1) begun, or caused to begin, a continuous program of physical on-site construction of the stack or (2) entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.
- 17.2.9(a)(4)** "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:
- 17.2.9(a)(4)(i)** using that portion of a stack which exceeds good engineering practice stack height;

- 17.2.9(a)(4)(ii)** varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or
- 17.2.9(a)(4)(iii)** increasing final exhaust gas plume rise by manipulating source-process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.
- 17.2.9(a)(4)(iv)** The preceding sentence does not include:
- 17.2.9(a)(4)(iv)(A)** the reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream:
- 17.2.9(a)(4)(iv)(B)** the merging of exhaust gas streams where:
- 17.2.9(a)(4)(iv)(B)(I)** the source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;
- 17.2.9(a)(4)(iv)(B)(II)** after July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or
- 17.2.9(a)(4)(iv)(B)(III)** before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the Health Officer shall presume that merging was significantly motivated by intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the Health Officer shall deny credit for the effects of such merging in calculating the allowable emissions for the source:
- 17.2.9(a)(4)(iv)(C)** smoke management in agricultural or silvicultural prescribed burning programs;
- 17.2.9(a)(4)(iv)(D)** episodic restrictions on residential woodburning and open burning; or
- 17.2.9(a)(4)(iv)(E)** techniques under Subdivision 17.2.9 (a)(4)(iii) which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.
- 17.2.9(a)(5)** "Good engineering practice" (GEP) stack height means the greater of:
- 17.2.9(a)(5)(i)** 65 meters measured from the ground-level elevation at the base of the stack;
- 17.2.9(a)(5)(ii)**
- 17.2.9(a)(5)(ii)(A)** for stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR Parts 51 and 52 provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

$$H_g = 2.5H$$

- 17.2.9(a)(5)(ii)(B)** 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 Health Officer may require the use of a field study or fluid model to verify GEP stack height for the source; or

- 17.2.9(a)(5)(iii)** the height demonstrated by a fluid model or a field study approved by the Health Officer, 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.
- 17.2.9(a)(6)** "Nearby" as used in Subparagraph 17.2.9 (a)(5) of this Paragraph is defined for a specific structure or terrain feature and
- 17.2.9(a)(6)(i)** for purposes of applying the formulae provided in Subdivision 17.2.9 (a)(5)(ii) means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile), and
- 17.2.9(a)(6)(ii)** for conducting demonstrations under Subdivision 17.2.9 (a)(5)(iii) means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (ht) of the feature, not to exceed 2 miles if such feature achieves a height (ht) 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formula provided in Clause 17.2.9(a)(5)(ii)(B) of this Section or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of stack.
- 17.2.9(a)(7)** "Excessive concentration" is defined for the purpose of determining GEP stack height under Subdivision 17.2.9 (a)(5)(iii) and means:
- 17.2.9(a)(7)(i)** for sources seeking credit for stack height exceeding that established under Subdivision 17.2.9 (a)(5)(ii), a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than a NAAQS. For sources subject to the PSD program (Part 2.4 of Chapter 2), an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emissions rate to be used in making demonstrations under this Chapter shall be prescribed by the New Source Performance Standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Health Officer, an alternative emission rate shall be established in consultation with the source owner or operator;
- 17.2.9(a)(7)(ii)** for sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under Subdivision 17.2.9 (a)(5)(ii), either:
- 17.2.9(a)(7)(ii)(A)** a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in Subdivision 17.2.9 (a)(7)(i) of this Section, except that the emission rate specified elsewhere in these regulations (or, in the absence of such a limit, the actual emission rate) shall be used, or
- 17.2.9(a)(7)(ii)(B)** the actual presence of a local nuisance caused by the existing stack, as determined by the Health Officer; and
- 17.2.9(a)(7)(iii)** for sources seeking credit after January 12, 1979, for a stack height determined under Subdivision 17.2.9 (a)(5)(ii) where the Health Officer requires that use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in Subdivision 17.2.9 (a)(5)(ii), a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.
- 17.2.9(b)** Before acting on any Synthetic Minor Operating Permit, the Health Officer shall require that the degree of emission limitation required of any source for control of any air pollutant shall not be affected by so much of any source's stack height that exceeds GEP or by any other dispersion technique, except as provided in Paragraph 17.2.9 (c).

- 17.2.9(c)** The provisions of Paragraph 17.2.9 (b) shall not apply to stack heights in existence, or dispersion techniques implemented, prior to December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by sources, as defined in § 111 (a)(3) of the Clean Air Act, which were constructed, or reconstructed or for which major modifications, as defined pursuant to Paragraphs 2.5.2 (d) and 2.4.2 (b), were carried out after December 31, 1970.
- 17.2.9(d)** If any existing source, after appropriate application of the preceding limitations and provisions, are found to exceed or potentially exceed a NAAQS or PSD increment, when operating within previously established emission limitations, the emissions limitations applicable to that source shall be modified so as to eliminate and prevent the exceedance.
- 17.2.9(e)** If any new source or source modification, after appropriate application of the preceding limitations and provisions, is predicted to exceed a NAAQS or PSD increment when evaluated under emission limitations consistent with other applicable rules and regulations, the emission limitations considered shall be deemed inadequate and different emission limits, based on air quality considerations, shall be made applicable.
- 17.2.9(f)** If any source provides a field study or fluid modeling demonstration proposing a GEP stack height greater than that allowed by Subdivisions 17.2.9 (a)(5)(i) and (ii), then the public will be notified of the availability of the study and provided the opportunity for a public hearing before any new or revised emission limitation or permit is approved.
- 17.2.9(g)** The actual stack height used or proposed by a source shall not be restricted in any manner by requirements of this Section.

17.3 Applicability.

The provisions of this Chapter shall apply only to Potential Major Sources, except for those Stationary Sources which are applying for, will apply for, or have obtained Operating Permits under Chapter 18 of these regulations.

17.4 Synthetic Minor Operating Permit Requirements.

17.4.1 General Provisions.

- 17.4.1(a)** The Synthetic Minor Operating Permit shall include specific conditions that restrict the facility's potential to emit and are federally enforceable.
- 17.4.1(b)** Any Stationary Source requesting a Synthetic Minor Operating Permit must undergo the public participation procedures prescribed in Part 17.5 of this Chapter.
- 17.4.1(c)** A Potential Major Source that does not obtain a Synthetic Minor Operating Permit shall apply for an Operating Permit.
- 17.4.1(d)** The Department shall act, within a reasonable time, on an application for a Synthetic Minor Operating Permit and shall notify the applicant in writing of its approval, conditional approval, or denial.
- 17.4.1(e)** In the event of a denial of a Synthetic Minor Operating Permit, the Department shall notify the applicant in writing of the reason therefor. Service of this notification may be made in person or by mail, and such service may be proved by the written acknowledgment of the persons served or affidavit of the person making the service. The Department shall not accept a further application unless the applicant has complied with the objections specified by the Department as its reasons for denial of Synthetic Minor Operating Permit.
- 17.4.1(f)** The facility shall obtain a Synthetic Minor Operating Permit prior to beginning operation of the new or modified Stationary Source and shall notify the Department at least ten (10) days prior to beginning such operation.
- 17.4.1(g)** The holder of a Synthetic Minor Operating Permit shall comply with all conditions contained in such permit, as well as all applicable provisions of these regulations. Such conditions shall be permanent, quantifiable and otherwise enforceable as a practical matter. Synthetic Minor Operating Permits which do not conform to the provision in this Chapter and the other requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA.

17.4.2 Existing Potential Major Sources.

- 17.4.2(a)** Any facility that would request a Synthetic Minor Operating Permit shall apply to the Department within one year after approval by EPA of the Operating Permit regulations in Chapter 18.

17.4.2(b) Any facility possessing an Operating Permit or whose potential emissions require it to obtain an Operating Permit may, at any time, accept federally enforceable permit restrictions which would allow it to obtain a Synthetic Minor Operating Permit.

17.4.3 New Potential Major Sources.

17.4.3(a) Any new Potential Major Source which commences construction after November 15, 1995, may apply to the Department for a Synthetic Minor Operating Permit. This application shall be accurately completed and submitted to the Department prior to such construction.

17.4.3(b) A Synthetic Minor Operating Permit for a new Potential Major Source shall expire and the application shall be canceled two years from the date of issuance of the Synthetic Minor Operating Permit if construction has not begun.

17.4.4 Modifications to Synthetic Minor Sources.

17.4.4(a) Any Stationary Source subject to the regulations in this Chapter that is modified so that it becomes a major source as defined in Chapter 18 shall apply for an Operating Permit within twelve (12) months of beginning operation.

17.4.4(b) Any modification which would require a change to existing permit conditions that restrict the facility's potential to emit or require new conditions that restrict the facility's potential to emit, as required in Paragraph 17.4.1(a) of this Chapter must undergo the public participation procedures prescribed in Part 17.5.

17.4.5 Reserved. (August 14, 2024.)

17.5 Public Participation.

17.5.1(a) The provisions of this Part apply only to potential major sources as specified in Paragraphs 17.4.1(b) and 17.4.4(b) of this Chapter. Notice shall be given by publication in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice and also to persons on a mailing list developed by the Department for persons desiring notice of permit action, including persons who have requested in writing to be on such a list. A copy of the notice shall also be provided to EPA;

17.5.1(b) The notice shall identify the affected facility; the name and address of the permittee; the address of the Department; the activity or activities involved in the permit action; the emissions change involved in any permit modification; the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, except for information entitled to be kept confidential, and all other materials available to the Department that are relevant to the permit decision; a brief description of the comment procedures required by this Part; and the time and place of any hearing that may be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled);

17.5.1(c) The Department shall provide at least 30 days for public comment; and

17.5.1(d) The Department shall keep a record of the commenters and also of the issues raised during the public participation process.

17.5.2 Any New Stationary Source which is required to undergo a public comment period shall not initiate construction until all public participation procedures have been completed.

CHAPTER 18 – MAJOR SOURCE OPERATING PERMITS

(Adopted December 8, 1993; Revised January 10, 1996; March 11, 1998; June 14, 2000; November 8, 2000; May 2, 2001; March 12, 2003; May 12, 2010; September 14, 2011; May 8, 2013, May 11, 2016; and August 14, 2024)

18.1 Definitions.

18.1.1 For the purposes of this chapter only, the following words and phrases, unless a different meaning is plainly required by the content, shall have the following meanings:

18.1.1(a) "Act" means the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.

18.1.1(b) "Affected source" means a source that includes one or more affected units subject to emission reduction requirements or limitations in title IV of the Act.

18.1.1(c) "Affected States" are all States:

18.1.1(c)(1) Whose air quality may be affected and that are contiguous to the State in which an operating permit, permit modification or permit renewal is being proposed; or

18.1.1(c)(2) That are within 50 miles of the permitted source.

18.1.1(d) "Affected Unit" means any unit subject to emission reduction requirements or limitations under title IV of the Act.

18.1.1(e) "Applicable Requirement" means all of the following as they apply to emissions units (including requirements that have been promulgated or approved by EPA through rule making at the time of issuance but have future effective compliance dates):

18.1.1(e)(1) Any standard or other requirement provided for in Alabama's State Implementation Plan approved or promulgated by EPA through rulemaking in Part 51 of title 40 in the Code of Federal Regulations that implements the relevant requirements of the Act, including any revisions to that plan promulgated in Subpart B of Part 52 of title 40 in the Code of Federal Regulations (CFR).

18.1.1(e)(2) Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rule making under title I, including Parts C or D, of the Act; (Air Pollution Prevention and Control, Prevention of Significant Deterioration and Plan Requirement for nonattainment areas).

18.1.1(e)(3) Any standard or other requirement in Chapter 13 (NSPS) of these Regulations; including Section 111(d) of the Act;

18.1.1(e)(4) Any standard or other requirement in Chapter 14 (NESHAPS) of these Regulations, including any requirement concerning accident prevention under Section 112(r)(7) of the Act;

18.1.1(e)(5) Any standard or other requirement of the acid rain program under title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder;

18.1.1(e)(6) Any requirements established pursuant to Section 504(b) or Section 114(a)(3) of the Act;

18.1.1(e)(7) Any standard or other requirement governing solid waste incineration, under Section 129 of the Act;

18.1.1(e)(8) Any standard or other requirement for consumer and commercial products, under Section 183(e) of the Act;

18.1.1(e)(9) Any standard or other requirement for tank vessels under Section 183(f) of the Act;

18.1.1(e)(10) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone (title VI of the Act, Stratospheric Ozone Protection) unless the Administrator has determined that such requirements need not be contained in a title V permit; and

18.1.1(e)(11) Any national ambient air quality standard as defined in Part 1.7 of Chapter 1 or increment as defined in Section 2.4.3 of Chapter 2 or visibility requirement in Section 2.4.15 of Chapter 2, but only as it would apply to temporary sources permitted pursuant to Part 18.9 of this Chapter.

18.1.1(f) "Department" means the Jefferson County Department of Health.

18.1.1(g) "Designated Representative" means a responsible person or official authorized by the owner or operator of an Affected Unit to represent the owner or operator in matters pertaining to the holding, transfer, or disposition of allowances allocated to an Affected Unit, and the submission of and compliance with permits, permit applications, and compliance plans for the Affected Unit.

- 18.1.1(h)** "Draft Permit" means the version of a permit for which the Department offers public participation under Section 18.15.4 or affected State review under Section 18.15.2 of this Chapter.
- 18.1.1(i)** "Emissions Allowable under the Permit" means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.
- 18.1.1(j)** "Emissions Unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 112(b) of the Act. This term is not meant to alter or affect the definition of the term "unit" for purposes of title IV (Acid Deposition Control) of the Act.
- 18.1.1(k)** "The EPA" or "the Administrator" means the Administrator of the EPA or his/her designee.
- 18.1.1(l)** "Final Permit" means the version of a permit issued by the Department that has completed all review procedures required by Parts 18.12 and 18.15 of this Chapter.
- 18.1.1(m)** "Fugitive Emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
- 18.1.1(n)** "General Permit" means a permit that meets the requirements of Part 18.8 of this Chapter.
- 18.1.1(o)** "Insignificant Activity" generally means any air emissions or air emissions unit at a plant that has the potential to emit less than 5 tons per year of any criteria pollutant or less than 1000 pounds per year of any pollutant listed in Appendix D of these regulations. Subject to EPA review and approval, the Health Officer may determine that certain types or classes of units may be considered insignificant at higher emission levels, or that, due to the nature of the pollutant(s) emitted, a unit may be considered significant at a lower emission rate. The Health Officer shall maintain a list of air emissions or air emissions units which are considered to be insignificant activity without a determination of emissions levels by the permittee. Changes to this list are subject to EPA review and approval. Activities subject to applicable requirements as defined in Paragraph (e) of this Section shall not be classified as insignificant.
- 18.1.1(p)** "Interim Approval" means a conditional approval of Chapter 18 by the Administrator that may extend the implementation deadline of this chapter.
- 18.1.1(q)** "Major Source" means any stationary source (or group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that are described in Subparagraph (1), or (2) of this definition. For the purposes of defining "major source," a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two digit code) as described in the Standard Industrial Classification Manual, 1987.
- 18.1.1(q)(1)** A major source under Section 112 of the Act, which is defined as:
- 18.1.1(q)(1)(i)** For pollutants other than radionuclides, 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, in the aggregate, 10 tons per year (tpy) or more of any hazardous air pollutant which has been listed in Appendix D of these regulations, 25 tpy or more of any combination of such hazardous air pollutants, or such lesser quantity as the Administrator may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources; or
- 18.1.1(q)(1)(ii)** For radionuclides, "major source" shall have the meaning specified by the Administrator by rule.
- 18.1.1(q)(2)** A major stationary source of air pollutants, as defined in section 302 of the Act, that directly emits or has the potential to emit, 100 tpy or more of any regulated air pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of this Chapter, unless the source belongs to one of the following categories of stationary source:
- Coal cleaning plants (with thermal dryers);
 - Kraft pulp mills;

- Portland cement plants;
- Primary zinc smelters;
- Iron and steel mills;
- Primary aluminum ore reduction plants;
- Primary copper smelters;
- Municipal incinerators capable of charging more than 250 tons of refuse per day;
- Hydrofluoric, sulfuric, or nitric acid plants;
- Petroleum refineries;
- Lime plants;
- Phosphate rock processing plants;
- Coke oven batteries;
- Sulfur recovery plants;
- Carbon black plants (furnace process);
- Primary lead smelters;
- Fuel conversion plants;
- Sintering plants;
- Secondary metal production plants;
- Chemical process plants;
- Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- Taconite ore processing plants;
- Glass fiber processing plants;
- Charcoal production plants;
- Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input; or
- All other stationary source categories regulated by a standard promulgated under Chapters 13 and 14 of these regulations;

18.1.1(q)(3) No source shall be considered a major source for the purposes of Chapter 18 due solely to emissions of GHGs.

18.1.1(r) "Operating Permit" or "Permit" (unless the context suggests otherwise) means any permit or group of permits that is issued, renewed, amended, or revised pursuant to this Chapter.

18.1.1(s) "Permit Modification" means a revision to a permit that meets the requirements of Sections 18.13.3 and 18.13.4 of these regulations.

18.1.1(t) "Permit Revision" means any permit modification or administrative permit amendment.

18.1.1(u) "Potential to Emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source's potential to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the Administrator. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder.

18.1.1(v) "Proposed Permit" means the version of a permit that the Department proposes to issue and forwards to the Administrator for review in compliance with Part 18.15 of these regulations.

18.1.1(w) "Regulated Air Pollutant" means the following:

18.1.1(w)(1) Nitrogen oxides or any volatile organic compounds;

18.1.1(w)(2) Any pollutant for which a national ambient air quality standard has been promulgated;

18.1.1(w)(3) Any pollutant that is subject to any standard promulgated under Section 111 of the Act;

18.1.1(w)(4) Any Class I or II substance subject to a standard promulgated under or established by title VI (Stratospheric Ozone Protection) of the Act; or

18.1.1(w)(5) Any pollutant subject to a standard promulgated under Section 112 or other requirements established under Section 112 of the Act, including Sections 112(g), (j), and (r) of the Act, including the following:

- 18.1.1(w)(5)(i)** Any pollutant subject to requirements under Section 112(j) of the Act. If the Administrator fails to promulgate a standard by the date established pursuant to Section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to Section 112(e) of the Act; and
- 18.1.1(w)(5)(ii)** Any pollutant for which the requirements of Section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to the Section 112(g)(2) requirement.
- 18.1.1(w)(6)** As of July 1, 2011 and after, greenhouse gases as defined in Paragraph 18.1.1(cc).
- 18.1.1(x)** "Renewal" means the process by which a permit is reissued at the end of its term.
- 18.1.1(y)** "Responsible Official" means one of the following:
- 18.1.1(y)(1)** For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
- 18.1.1(y)(1)(i)** The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
- 18.1.1(y)(1)(ii)** The delegation of authority to such representatives is approved in advance by the Department;
- 18.1.1(y)(2)** For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- 18.1.1(y)(3)** For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this definition and this Chapter, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or
- 18.1.1(y)(4)** For affected sources:
- 18.1.1(y)(4)(i)** The designated representative in so far as actions, standards, requirements, or prohibitions under title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder are concerned; and
- 18.1.1(y)(4)(ii)** The designated representative for any other purposes under this Chapter.
- 18.1.1(z)** "Section 502(b)(10) Changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- 18.1.1(aa)** "Stationary Source" means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed in Appendix D of these regulations.
- 18.1.1(bb)** "Trivial Activity" means any air emissions from a unit that is considered inconsequential, as determined by the Health Officer. The Health Officer shall maintain a list of air emission units that have been determined to be trivial activities.
- 18.1.1(cc)** "Greenhouse gases (GHGs)" means the aggregate of: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
- 18.1.1(dd)** "CO₂ equivalent emissions (CO₂e)" shall represent the amount of GHGs emitted as computed by the following:
- 18.1.1(dd)(1)** Multiplying the mass amount of emissions (TPY) for each of the six greenhouse gases in the pollutant GHGs by the gas's associated global warming potential as listed in Appendix G.
- 18.1.1(dd)(2)** Sum the resultant value determined in Subparagraph 18.1.1(dd)(1) for each gas to calculate the TPY of CO₂e.
- 18.1.1(ee)** "Alternative operating scenario (AOS)" means a scenario authorized in a Chapter 18 permit that involves a change at the source for a particular emissions unit, and that either results in the unit being subject to one or more applicable requirements which differ from those applicable to the emissions unit prior to implementation of the change or renders inapplicable one or more requirements previously applicable to the emissions unit prior to implementation of the change.

18.2 General Provisions.

- 18.2.1** Any Major Source operating without an Air Permit, an Operating Permit or a Synthetic Minor Operating Permit (as defined in Chapters 2, 17 and 18 of these regulations) may continue to operate (or may restart) only if its owner or operator obtains an Operating Permit or a Synthetic Minor Operating Permit prior to a date to be set by the Health Officer (or prior to restarting).
- 18.2.2** Display of Operating Permit. A person who has been granted an Operating Permit for any article, machine, equipment, or other contrivance shall keep such permit under file or on display at all times at the site where the article, machine, equipment, or other contrivance is located and will make such a permit readily available for inspection by any and all persons who may request to see it.
- 18.2.3** The Health Officer shall have the authority to decide cases where an article, machine, equipment, or other contrivance is not clearly subject to nor exempt from the application of this Part. The operator or builder of such an article, machine, equipment, or other contrivance may appeal the Health Officer's classification to the Board of Health, which shall overrule the Health Officer only if it is shown that he/she acted arbitrarily and contrary to the Act.
- 18.2.4** The Health Officer may issue an Operating Permit subject to conditions which will bring the operation of any article, machine, equipment, or other contrivance within the standards of Paragraph 18.2.8(a) of this Part in which case the conditions shall be specified in writing. Commencing construction or operation under such an Operating Permit shall be deemed acceptance of all the conditions specified. The Health Officer may issue an Operating Permit with revised conditions upon receipt of a new application, if the applicant demonstrates that the article, machine, equipment, or other contrivance can operate within the standards of Paragraph 18.2.8(a) of this Part under the revised conditions.
- 18.2.5** Provision of Sampling and Testing Facilities. A person operating or using any article, machine, equipment or other contrivance for which these rules and regulations require a permit shall provide and maintain such sampling and testing facilities as specified in the Operating Permit.
- 18.2.6** Transfer. An Operating Permit shall not be transferable whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another except as provided in Subparagraph 18.13.1(a)(5).
- 18.2.7** Operating Permit Requirements to Alabama Department of Environmental Management.
- 18.2.7(a)** The Health Officer shall provide the Director of the Alabama Department of Environmental Management with the opportunity to review all Operating Permit applications, the analysis of the Operating Permits, and proposed Operating Permit conditions at least thirty days prior to date of issuance of an Operating Permit; except those Operating Permits, as agreed upon between the Health Officer and the Director of Alabama Department of Environmental Management that may be exempt from the thirty-day period and provided files are maintained on all permits exempted from review by the Alabama Department of Environmental Management.
- 18.2.7(b)** The Jefferson County Department of Health (Air Division) shall provide to the Director of the Alabama Department of Environmental Management a copy of preliminary determinations and public comment notices for all Operating Permits issued pursuant to this Chapter at the same time the notice is forwarded for publication in the newspaper.
- 18.2.8** General Standards for Granting Operating Permits.
- 18.2.8(a)** The Health Officer shall deny an Operating Permit if the applicant does not show that every article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment, that it is expected to operate without emitting or without causing to be emitted air contaminants in violation of these rules and regulations.
- 18.2.8(b)** The Health Officer shall deny an Operating Permit if the applicant does not present, in writing, a plan whereby the emission of air contaminants by every article, machine, equipment, or other contrivance described in the permit application, will be reduced during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency in accordance with the provisions of Chapter 4 where such plan is required.
- 18.2.8(c)** Before an Operating Permit is granted, the Health Officer may require the applicant to provide and maintain such facilities as are necessary for sampling and testing purposes in order to secure information that will disclose the nature, extent, quantity or degree of air contaminants discharged into the atmosphere from the article, machine, equipment, or other contrivance described in the Operating Permit. In the event of such a requirement, the Health Officer shall notify the applicant in writing of the required size, number, and location of the sampling platform; the access to the sampling platform; and the utilities for operating the sampling and testing equipment. The Health

Officer may also require the applicant to install, use, and maintain such monitoring equipment or methods, including enhanced monitoring methods prescribed under Section 504(b) or Section 114(a)(3); sample such emissions in accordance with such methods, at such locations, intervals, and procedures as may be specified; and provide such information as the Health Officer may require.

18.2.8(d) Before acting on an application for an Operating Permit, the Health Officer may require the applicant to furnish further information or further plans or specifications.

18.2.8(e) If the Health Officer finds that the article, machine, or other contrivance has been constructed not in accordance with the Operating Permit application, and if the changes noted are of a substantial nature in that the amount of air contaminants emitted by the article, machine, equipment, or other contrivance may be increased, or in that the effect is unknown, then he/she shall revoke the Operating permit. The Health Officer shall not accept any further application for an Operating Permit until the article, machine, equipment, or other contrivance has been reconstructed in accordance with said Operating Permit or until the applicant has proven to the satisfaction of the Health Officer that the change will not cause an increase in the emission of air contaminants.

18.2.9 Revocation of Operating Permits. Any Operating permit granted by the Health Officer may be revoked for any of the following causes:

18.2.9(a) Failure to comply with any conditions of the permit;

18.2.9(b) Failure to establish and maintain such records, make such reports, install, use and maintain such monitoring equipment or methods; and sample such emissions in accordance with such methods at such locations, intervals and procedures as the Health Officer may prescribe in accordance with Section 1.9.2 of Chapter 1.

18.2.9(c) Failure to comply with any provisions of any Departmental administrative order issued concerning the permitted Stationary Source or facility.

18.2.9(d) Failure to allow employees of the Department upon proper identification to:

18.2.9(d)(1) Enter any premises where any article, machine, equipment, or other contrivance described in Section 18.3.1 is located or in which any records are required to be kept under provisions of the permit and/or these rules and regulations;

18.2.9(d)(2) Have access to and copy any records required to be kept under provision of the permit and/or these rules and regulations;

18.2.9(d)(3) Inspect any monitoring equipment or practices being maintained pursuant to the permit and/or these rules and regulations; and

18.2.9(d)(4) Have access to and sample any discharge of air contaminants resulting directly or indirectly from the operation of any article, machine, equipment, or other contrivance described in Section 18.3.1 of this Chapter.

18.2.9(e) Failure to comply with these rules and regulations.

18.2.9(f) For any other cause, after a hearing which establishes, in the judgment of the Department, that continuance of the permit is not consistent with the purpose of the Act or these rules and regulations.

18.2.10 Stack Heights

18.2.10(a) Definitions. For purposes of this Section, the following terms will have the meanings ascribed in this Section.

18.2.10(a)(1) "Emission limitation" and "emission standard" mean a requirement, established by the Jefferson County Board of Health or the EPA Administrator, which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

18.2.10(a)(2) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

18.2.10(a)(3) "A stack in existence" means that the owner or operator had (1) begun, or caused to begin, a continuous program of physical on-site construction of the stack or (2) entered into binding agreements or contractual obligations, which could not be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

18.2.10(a)(4) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

18.2.10(a)(4)(i) Using that portion of a stack which exceeds good engineering practice stack height;

18.2.10(a)(4)(ii) Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

18.2.10(a)(4)(iii) Increasing final exhaust gas plume rise by manipulating source-process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

18.2.10(a)(4)(iv) The preceding sentence does not include:

18.2.10(a)(4)(iv)(A) The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

18.2.10(a)(4)(iv)(B) The merging of exhaust gas streams where:

18.2.10(a)(4)(iv)(B)(I) The source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;

18.2.10(a)(4)(iv)(B)(II) After July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or

18.2.10(a)(4)(iv)(B)(III) Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, and increase in the quantity of pollutants actually emitted prior to the merging, the Health Officer shall presume that merging was significantly motivated by intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the Health Officer shall deny credit for the effects of such merging in calculating the allowable emissions for the source;

18.2.10(a)(4)(iv)(C) Smoke management in agricultural or silvicultural prescribed burning programs;

18.2.10(a)(4)(iv)(D) Episodic restrictions on residential wood burning and open burning; or

18.2.10(a)(4)(iv)(E) Techniques under Subdivision 18.2.10(a)(4)(iii) which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.

18.2.10(a)(5) "Good engineering practice" (GEP) stack height means the greater of:

18.2.10(a)(5)(i) 65 meters, measured from the ground-level elevation at the base of the stack:

18.2.10(a)(5)(ii)

18.2.10(a)(5)(ii)(A) for stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR Parts 51 and 52, provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

$$H_g = 2.5H$$

18.2.10(a)(5)(ii)(B) 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 Health Officer may require the use of a field study or fluid model to verify GEP stack height for the source; or

- 18.2.10(a)(5)(iii)** The height demonstrated by a fluid model or a field study approved by the Health Officer 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.
- 18.2.10(a)(6)** "Nearby" as used in Subparagraph 18.2.10(a)(5) of this Paragraph is defined for a specific structure or terrain feature and
- 18.2.10(a)(6)(i)** for purposes of applying the formulas provided in Subdivision 18.2.10(a)(5)(ii) means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile), and
- 18.2.10(a)(6)(ii)** for conducting demonstrations under Subdivision 18.2.10(a)(5)(iii) means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (ht) of the feature, not to exceed 2 miles if such feature achieves a height (ht) 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formula provided in Clause 18.2.10(a)(5)(ii)(B) or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.
- 18.2.10(a)(7)** "Excessive concentration" is defined for the purpose of determining GEP stack height under Subdivision 18.2.10(a)(5)(iii) and means:
- 18.2.10(a)(7)(i)** For sources seeking credit for stack height exceeding that established under Subdivision 18.2.10(a)(5)(ii), a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than a NAAQS. For sources subject to the PSD program (Part 2.4 of Chapter 2 of these Regulations), an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emissions rate to be used in making demonstrations under this Part shall be prescribed by the new source performance standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Health Officer, an alternative emission rate shall be established in consultation with the source owner or operator;
- 18.2.10(a)(7)(ii)** For sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under Subdivision 18.2.10(a)(5)(ii) either:
- 18.2.10(a)(7)(ii)(A)** A maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in Subdivision 18.2.10(a)(7)(i) except that the emission rate specified elsewhere in these regulations (or, in the absence of such a limit, the actual emission rate) shall be used, or
- 18.2.10(a)(7)(ii)(B)** The actual presence of a local nuisance caused by the existing stack, as determined by the Health Officer, and
- 18.2.10(a)(7)(iii)** For sources seeking credit after January 12, 1979, for a stack height determined under Subdivision 18.2.10(a)(5)(ii) where the Health Officer requires that use of a field study or fluid model to verify GEP stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in Subdivision 18.2.10(a)(5)(ii), a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

- 18.2.10(b)** Before acting on any Major Source Operating Permit, the Health Officer shall require that the degree of emission limitation required of any source for control of any air pollutants shall not be affected by so much of any source's stack height that exceeds GEP or by any other dispersion technique, except as provided in Paragraph 18.2.10(c).
- 18.2.10(c)** The provisions of Paragraph 18.2.10(b) shall not apply to stack heights in existence, or dispersion techniques implemented, prior to December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by sources, as defined in Section 111(a)(3) of the Clean Air Act, which were constructed, or reconstructed or for which major modifications, as defined pursuant to Paragraphs 2.4.2(b) and 2.5.2(b) were carried out after December 31, 1970.
- 18.2.10(d)** If any existing source, after appropriate application of the preceding limitations and provisions, is found to exceed or potentially exceed a NAAQS or PSD increment, when operating within previously established emission limitations, the emissions limitations applicable to that source shall be modified so as to eliminate and prevent the exceedance.
- 18.2.10(e)** If any new source or source modification, after appropriate application of the preceding limitations and provisions, is predicted to exceed a NAAQS or PSD increment when evaluated under emission limitations consistent with other applicable rules and regulations, the emission limitations considered shall be deemed inadequate and different emission limits, based on air quality considerations, shall be made applicable.
- 18.2.10(f)** If any source provides a field study or fluid modeling demonstration proposing a GEP stack height greater than that allowed by Subdivisions 18.2.10(a)(5)(i) and 18.2.10(a)(5)(ii), then the public will be notified of the availability of the study and provided the opportunity for a public hearing before any new or revised emission limitation or permit is approved.
- 18.2.10(g)** The actual stack height used or proposed by a source shall not be restricted in any manner by requirements of this Section.

18.3 Applicability.

18.3.1 Except as exempted under Section 18.3.2 below and elsewhere herein, the following sources are subject to the permitting requirements under these regulations:

- 18.3.1(a)** Any major source as defined in Part 18.1 of this Chapter;
- 18.3.1(b)** Any source, including an area source, subject to a standard, limitation, or other requirement under Chapter 13 or 14 of these regulations, except that a source is not required to obtain an Operating Permit solely because it is subject to regulations or requirements under section 112(r) of the Act;
- 18.3.1(c)** Any affected source as defined in Part 18.1 of this Chapter.

18.3.2 The following sources are exempt from the requirements of this Chapter:

- 18.3.2(a)** Non-major sources subject to Chapter 13 or 14 of these regulations prior to July 21, 1992;
- 18.3.2(b)** Non-major sources subject to Chapter 13 or 14 of these regulations which have an applicability date after July 21, 1992 that have been exempted by the Administrator from the requirements of 40 CFR 70;
- 18.3.2(c)** Wood heaters subject to Chapter 13 of these regulations and asbestos demolitions and renovation sources subject to Chapter 14 of these regulations.

18.3.3 Emission units subject to Chapter 18.

- 18.3.3(a)** For major sources, the permit application shall contain all applicable requirements for all emissions units within the major source.
- 18.3.3(b)** For nonmajor sources, the permit application shall contain all applicable requirements for those emissions units that cause the source to be subject to this chapter.

18.3.4 Fugitive emissions shall be included in the permit application and the Operating Permit in the same manner as stack emissions regardless of whether or not the source category is included in the list of sources contained in the definition of a major source as given in Part 18.1 of this chapter.

18.4 Permit Application Requirements.

18.4.1 Upon becoming subject to these regulations, a source must submit an application, as described in this Part within 12 months. The Health Officer may require some sources to submit their applications earlier than 12 months after Chapter

18 rules become applicable if it is determined that earlier submittal is necessary to satisfy the requirements in Section 18.12.1. The Department shall notify any emission source that must submit early applications at least one year in advance of the date the submittal is due.

- 18.4.2** Sources subject to Chapter 2, Part 2.6 or subject to preconstruction review under title I of the Act must apply for a permit under this Chapter within 12 months after commencing operation, except, when an existing permit issued under this chapter prohibits construction or a change in operation, a permit revision must be obtained before commencing operation.
- 18.4.3** Renewal. An application for renewal shall be submitted at least six (6) months before the date of permit expiration, unless a longer period (not to exceed 18 months) is specified in the permit.
- 18.4.4** Applications for initial phase II acid rain permits shall be submitted by January 1, 1996 for sulfur dioxide (SO₂) and by January 1, 1998 for nitrogen oxides (NO_x).
- 18.4.5** Complete application. Unless the Department notifies the permit applicant in writing that the application is not complete, the application is considered complete 60 days after receipt by the Department. If, while processing the application, the Department finds that more information is needed to evaluate the application, the applicant must submit such information by a reasonable deadline(s) as set by a written request(s) from the Department.
- 18.4.6** A source may operate without a permit under this Chapter between the date the application has been deemed complete and the date the final permit is issued, provided that the applicant submits any requested additional material by the deadline(s) specified by the Department.
- 18.4.7** Duty to supplement or correct an application. A source must submit additional information to the Department to supplement or correct an application promptly after becoming aware of the need for additional or corrected information. Also, a source must supply to the Department additional information concerning any new requirements which have become applicable after a complete application has been filed but before a draft permit is released.
- 18.4.8** Standard application form and required information. The following information shall be included in an application by a source for a permit under this Chapter:
 - 18.4.8(a)** Identifying information, including company name and address (or plant name and address if different from the company name), owner's name and agent, and telephone number and names of plant site manager/contact;
 - 18.4.8(b)** A description of the source's processes and products (by four-digit Standard Industrial Classification Code), including any processes and products associated with each alternate scenario that is identified by the source and a list of insignificant sources and the basis for the determination(s);
 - 18.4.8(c)** The following emissions-related information:
 - 18.4.8(c)(1)** A list of all emissions of pollutants for which the source is considered to be major and a list of all emissions of regulated air pollutants. The permit application shall describe all emissions of regulated air pollutants emitted from any emissions unit, except where such units are exempted under this Part. The source shall submit additional information related to the emissions of air pollutants sufficient to verify which requirements are applicable to the source, and other information necessary to determine the amount of any permit fees owed under the fee schedule approved pursuant to Part 16.4 of Chapter 16 of these regulations;
 - 18.4.8(c)(2)** Identification and description of all points of emissions described in Subdivision 18.4.8(c)(1) of this Part in sufficient detail to establish the basis for fees and the applicability of the requirements of this Chapter;
 - 18.4.8(c)(3)** Emissions rates of all pollutants in tons per year (tpy) and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method, or alternative method approved by the Health Officer;
 - 18.4.8(c)(4)** The following information to the extent it is needed to determine or regulate emissions: fuels to be used, rate of fuel use, raw materials that will be used in the production process, production rates, and operating schedules;
 - 18.4.8(c)(5)** Identification and description of all air pollution control equipment and compliance monitoring devices or activities that will be used by the source;
 - 18.4.8(c)(6)** Limitations that will be placed on the source's operation so as to affect emissions or any work practice standards that will be implemented, where applicable, for all regulated pollutants.

- 18.4.8(c)(7)** Other information that may be required to address other applicable requirements (including, but not limited to, information relating to stack height limitations developed pursuant to Section 123 of the Act).
- 18.4.8(c)(8)** Calculations on which the information in Subparagraphs 18.4.8(c)(1) through (7) are based.
- 18.4.8(c)(9)** Trivial and Insignificant Activities.
 - 18.4.8(c)(9)(i)** Insignificant activities shall not necessarily be listed in permits issued pursuant to the provisions of this Chapter, provided they are listed in the permit application, and they are not expected to violate any generally applicable requirements listed in the permit.
 - 18.4.8(c)(9)(ii)** Trivial activities shall not be subject to the provisions of this Chapter.
- 18.4.8(d)** The following air pollution control requirements:
 - 18.4.8(d)(1)** Citations and descriptions of all applicable statutory and administrative code requirements, and
 - 18.4.8(d)(2)** A description of or reference to any applicable test methods for determining compliance with each applicable statutory or administrative code requirement.
- 18.4.8(e)** Other information that may be required by the Department to enforce and implement other requirements of this Chapter;
- 18.4.8(f)** An explanation of all proposed exemptions from otherwise applicable requirements;
- 18.4.8(g)** Additional information determined by the Department to be necessary to define alternative operating scenarios that are identified by the source pursuant to Section 18.5.13 or to define permit terms or conditions implementing Paragraph 18.5.14 or Part 18.14.
- 18.4.8(h)** A compliance plan for the source that contains the following:
 - 18.4.8(h)(1)** A description of the compliance status of the source with respect to all applicable requirements and a compliance schedule.
 - 18.4.8(h)(2)** A statement that the source will continue to comply with all regulatory requirements that it is now in compliance with;
 - 18.4.8(h)(3)** A statement that the source will, on a timely basis, meet such requirements that will become effective during the permit term unless a more detailed schedule is expressly required by the applicable requirement;
 - 18.4.8(h)(4)** A narrative description of how the source will achieve compliance with requirements for which the source is not in compliance at the time of permit issuance with a compliance schedule for the source. Any schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the source will be in noncompliance at the time of permit issuance. The compliance schedule shall be at least as stringent as any compliance schedule that is contained in any judicial consent decree or administrative order to which the source is subject. Any schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.
 - 18.4.8(h)(5)** A schedule for submission of certified progress reports no less frequently than every 6 months for sources required to have a schedule of compliance to remedy a violation.
 - 18.4.8(h)(6)** The compliance plan content requirements specified in this Paragraph shall apply and be included in the acid rain portion of a compliance plan for an affected source, except as specifically superseded by regulations promulgated under title IV of the Act with regard to the schedule and method(s) the source will use to achieve compliance with the acid rain emissions limitations.
- 18.4.8(i)** A compliance certification, including the following:
 - 18.4.8(i)(1)** A certification of compliance with all applicable requirements by a responsible official consistent with Section 18.4.9 of this Chapter and Section 114(a)(3) of the Act, as it relates to the enhanced monitoring requirements;
 - 18.4.8(i)(2)** A statement of methods used for determining compliance, including a description of monitoring, record keeping, and reporting requirements and test methods;

- 18.4.8(i)(3)** A schedule for submission of compliance certifications during the permit term, which shall be submitted annually, or more frequently if required by the underlying applicable requirement or by the Department; and
- 18.4.8(i)(4)** A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.
- 18.4.8(j)** The use of nationally-standardized forms for acid rain portions of permit applications and compliance plans as required by regulations promulgated under title IV of the Act.
- 18.4.8(k)** The following types of insignificant activities need not be included in permit applications. An application may not omit information needed to determine the applicability of, or to impose, any applicable requirement, or to calculate the application fee amount required under Chapter 15. Activities subject to an NSPS, NESHAP or MACT regulation cannot be an insignificant activity.
 - 18.4.8(k)(1)** Insignificant activities:
 - 18.4.8(k)(1)(i)** Mobile sources;
 - 18.4.8(k)(1)(ii)** Air-conditioning units used for human comfort that are not subject to applicable requirements under title VI of the Act and do not exhaust air pollutants into the ambient air from any manufacturing or other industrial process;
 - 18.4.8(k)(1)(iii)** Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing or other industrial process;
 - 18.4.8(k)(1)(iv)** Heating units used for human comfort that do not provide heat for any manufacturing or other industrial process;
 - 18.4.8(k)(1)(v)** Noncommercial food preparation;
 - 18.4.8(k)(1)(vi)** Consumer use of office equipment and products; and
 - 18.4.8(k)(1)(vii)** Janitorial services and consumer use of janitorial products.
 - 18.4.8(k)(2)** This provision replaces the original list of TRIVIAL AND INSIGNIFICANT ACTIVITIES dated January 8, 1998 in its entirety.

18.4.9 Certification of truth, accuracy and completeness:

Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this Chapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any document required to be submitted with a CTAC shall be submitted on paper with a "wet-ink" signature.

18.5 Permit Content.

All permits required under this Chapter shall include certain standard permit requirements. The permits shall contain the following:

- 18.5.1** Applicable emissions limitations and standards and operational requirements and limitations necessary to assure compliance with all applicable requirements at the time of permit issuance. In addition, the permit shall include:
 - 18.5.1(a)** A statement or reference to the origin and authority for each term or condition in the permit and any difference in form as compared to the applicable requirement under this Chapter upon which the term or condition is based; and
 - 18.5.1(b)** A statement to the effect that where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Department.
- 18.5.2** Duration of Operating Permits
 - 18.5.2(a)** The Department shall issue permits for a fixed period of five years, except as provided in Paragraph (b) below.
 - 18.5.2(b)** Solid waste incineration units combusting municipal waste subject to standards under Section 129(e) of the Act shall have a fixed term not to exceed 12 years. However, said permits shall be reviewed every five years.

- 18.5.2(c)** Permits which are issued for new emission units before the units become operational shall be effective for five years after operation of the unit commences.
- 18.5.3** Monitoring and record keeping requirements.
- 18.5.3(a)** Permits shall contain the following requirements with respect to monitoring:
- 18.5.3(a)(1)** All emissions monitoring and analysis procedures or test methods required under the applicable requirements, including any procedures and methods promulgated pursuant to Section 114(a)(3) or 504(b) of the Act;
- 18.5.3(a)(2)** Where the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring (e.g. record keeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit, as reported pursuant to Paragraph 18.5.3(c) of this Part. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. In certain instances record keeping provisions may be sufficient to meet the requirements of this Paragraph of this Part; and
- 18.5.3(a)(3)** As necessary, information concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods.
- 18.5.3(b)** With respect to recordkeeping, the permit shall incorporate all requirements of this chapter and require, where appropriate, the following:
- 18.5.3(b)(1)** Records of required monitoring information of the source that include the following:
- 18.5.3(b)(1)(i)** The date, place (as defined in the permit), and time of all sampling or measurements;
- 18.5.3(b)(1)(ii)** The date(s) analyses were performed;
- 18.5.3(b)(1)(iii)** The company or entity that performed the analyses;
- 18.5.3(b)(1)(iv)** The analytical techniques or methods used;
- 18.5.3(b)(1)(v)** The results of all analyses;
- 18.5.3(b)(1)(vi)** The operating conditions that existed at the time of sampling or measurement; and
- 18.5.3(b)(2)** Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.
- 18.5.3(c)** Permits shall incorporate all reporting requirements of this Chapter and require the following:
- 18.5.3(c)(1)** The source shall submit reports to the Department of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Section 18.4.9 of these regulations.
- 18.5.3(c)(2)** The source shall report deviations from permit requirements within 2 working days such deviations, including those attributable to upset conditions as defined in the permit, the probable cause of said deviations, and any corrective actions or preventive measure that were taken.
- 18.5.4** Permits shall contain statements to the effect that emissions exceeding any allowances that the source lawfully holds under title IV of the Act or the regulations promulgated thereunder are prohibited. Furthermore, the following shall be applicable:
- 18.5.4(a)** No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement;
- 18.5.4(b)** No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement;
- 18.5.4(c)** Any such allowance shall be accounted for according to the procedures established in regulations promulgated pursuant to title IV of the Act.

- 18.5.5** Permits shall include a severability clause for the purpose of continuation of a permit in the event a portion(s) of the permit is successfully challenged in a legal forum.
- 18.5.6** Permits shall contain a provision that states that the source (permittee) must comply with all conditions of the Jefferson County Board of Health Air Pollution Control Rules and Regulations: Noncompliance with a permit will constitute a violation of the Act and the Jefferson County Board of Health Air Pollution Control Rules and Regulations and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the source.
- 18.5.7** Permits shall contain a provision that states the source (permittee) shall not use as a defense in an enforcement action, that maintaining compliance with conditions of the permit would have required halting or reducing the permitted activity.
- 18.5.8** Permits shall contain a provision that states that the permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the source (permittee) for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.
- 18.5.9** Permits shall contain a provision that states that no property rights of any sort, or any exclusive privilege are conveyed through the issuance of the permit.
- 18.5.10** Permits shall contain a provision that states that the source (permittee) shall furnish to the Department, within 30 days or for other such reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by the permit.
- 18.5.11** Permits shall contain a provision that states that the source (permittee) must have paid all fees required by these regulations or the permit is not valid.
- 18.5.12** Permits shall state that no permit revision shall be required, under any approved economic incentives, marketable permit, emissions trading and other similar programs or processes for changes that are provided for in the permit.
- 18.5.13** The permit shall contain a provision that quantifies the terms and conditions for reasonably anticipated alternative operating scenarios that were identified by the source in its application and are acceptable to the Department. The alternative operating scenarios terms and conditions shall:
- 18.5.13(a)** Require the source, contemporaneously with making a change from one operating scenario to another, to record in a log at the permitted facility a record of the scenario under which it is operating;
- 18.5.13(b)** Ensure that the terms and conditions of each such alternative scenario meet all applicable requirements and the requirements of this Chapter.
- 18.5.14** The permit shall contain terms and conditions, if specifically requested by the applicant, which authorize the trading of emissions increases and decreases in the permitted facility solely for the purposes of complying with a federally enforceable emissions cap that is established in the permit independent of otherwise applicable requirements, to the extent that the applicable requirements provide for trading such increases and decreases without a case-by-case approval of each emissions trade.
- 18.5.14(a)** Such terms and conditions:
- 18.5.14(a)(1)** Shall include all terms required under Part 18.5 and Part 18.7 to determine compliance;
- 18.5.14(a)(2)** May extend the permit shield described in Part 18.10 to all terms and conditions that allow such increases and decreases in emissions; and
- 18.5.14(a)(3)** Must meet all applicable requirements and requirements of this Chapter.
- 18.5.14(b)** All requests for emissions trading under the Chapter shall include proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. Such requests shall also include sufficient proposed monitoring, recordkeeping, and reporting as necessary to ensure compliance with all applicable requirements. The applicant shall provide written notice of requests for emissions trading under the Chapter to the Department and EPA at least seven (7) days prior to the anticipated change. This notice shall state when the change

would occur and shall describe the changes in emissions that would result and how these increases and decreases in emissions would comply with the terms and conditions of the permit.

18.6 Federally Enforceable Requirements.

18.6.1 All terms in a permit that are required to be part of a permit pursuant to the Act are federally enforceable by EPA, the Department and citizens in general. However, those provisions of a permit that are not required under the Act are considered to be Jefferson County Department of Health or ADEM permit provisions and consequently, are not federally enforceable by EPA and citizens in general.

18.6.2 Those provisions of a permit that are Jefferson County Department of Health or ADEM provisions shall be separated from the federally enforceable terms. Such Jefferson County Department of Health or ADEM provisions shall be clearly identified in the permit.

18.7 Compliance Requirements.

Permits shall contain the following elements with respect to compliance:

18.7.1 Compliance certification, testing, monitoring, reporting, and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document (including reports submitted by the source (permittee)) that is required in a permit shall contain a certification by a responsible official that meets the requirements of Section 18.4.9 of these regulations.

18.7.2 Inspection and entry requirements that mandate that the permittee shall allow the Department or an authorized representative, upon presentation of credentials and other documents that may be required by law, to conduct the following:

18.7.2(a) Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of a permit;

18.7.2(b) Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of a permit;

18.7.2(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required pursuant to a permit; and

18.7.2(d) Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

18.7.3 A schedule of compliance consistent with Paragraph 18.4.8(h) of these regulations.

18.7.4 Progress reports consistent with the applicable schedule of compliance and Paragraph 18.4.8(h) to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the Department. Such progress reports shall contain the following:

18.7.4(a) Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and/or dates when such activities, milestones or compliance were achieved; and

18.7.4(b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measure adopted.

18.7.5 Requirements for compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. Permits shall include each of the following:

18.7.5(a) The frequency of submissions of compliance certifications, which shall be at least annually unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

18.7.5(b) A means for monitoring the compliance of the source with its emissions limitations, standards, and work practices in accordance with Section 18.5.3;

18.7.5(c) A requirement that the compliance certification include the following:

18.7.5(c)(1) The identification of each term or condition of the permit that is the basis of the certification;

18.7.5(c)(2) The compliance status;

18.7.5(c)(3) Whether compliance has been continuous or intermittent;

18.7.5(c)(4) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Section 18.5.3; and

18.7.5(c)(5) Such other facts as the Department may require to determine the compliance status of the source;

18.7.5(d) A requirement that all compliance certifications be submitted to the Administrator as well as to the Department; and

18.7.5(e) Such additional requirements as may be specified pursuant to Sections 114(a)(2) and 504(b) of the Act.

18.7.6 Such other provisions as the Department may require.

18.8 General Permits.

18.8.1 The Department may issue a general permit to any source category if it concludes that the category is appropriate for permitting on a generic basis after notice and opportunity for public participation provided under Section 18.15.4 of this Chapter. No general permit may be issued for affected sources under the acid rain program unless otherwise provided in regulations promulgated under title IV of the Act.

18.8.2 A general permit may be issued for a source category based upon an application from a source within the source category or upon the Department's own initiative. The same procedures for issuance of a general permit are applicable as for any other permit issued under this Chapter.

18.8.3 A general permit may be issued for the following purposes:

18.8.3(a) To establish terms and conditions to implement applicable requirements for a source category;

18.8.3(b) To establish terms and conditions to implement applicable requirements for specified categories of changes to permitted sources;

18.8.3(c) To establish terms and conditions for new requirements that apply to sources with existing permits; and

18.8.3(d) To establish federally-enforceable caps on emissions from sources in a specified category.

18.8.4 The Department may issue a general permit if it finds that:

18.8.4(a) There are several permittees or permit applicants who have the same or substantially similar operations, emissions, activities, or facilities;

18.8.4(b) The permittees or permit applicants emit the same types of regulated air pollutants;

18.8.4(c) The operations, emissions, activities, or facilities are subject to the same or similar standards, limitations, and operating requirements; and

18.8.4(d) The operations, emissions, activities, or facilities are subject to the same or similar monitoring requirements.

18.8.5 A general permit issued under this Part shall identify criteria by which sources may qualify for the general permit. After a general permit has been issued, any source may submit a request to be covered under the permit.

18.8.5(a) A request for coverage under a general permit shall identify the source and provide information sufficient to demonstrate that it falls within the source category covered by the general permit, together with any additional information that may be specified in the general permit.

18.8.5(b) A final action approving a request for coverage under a general permit shall not require repeating the public participation procedures.

18.8.6 A copy of the general permit, together with a list of sources approved for coverage under it, shall be kept on file for public review at the Department's office.

18.8.7 If some, but not all, of a source's operations, activities, and emissions are eligible for coverage under one or more general permits, the source may apply for and receive coverage under the general permits for the operations, activities, and emissions that are so eligible. If the source is required under Part 18.4 of this Chapter to obtain a permit addressing the remainder of its operations, activities, and emissions, it may apply for and receive a permit that addresses specifically only those items not covered by general permits. In such a case, the source's permit shall identify all operations, activities, and emissions that are subject to general permits and incorporate those general permits by reference or use this for General Permits instead of Sections 18.8.1 through 18.8.6 above.

18.8.8 If a source that is covered by a general permit is later determined to have not qualified for such general permit, the source shall have been operating without an operating permit.

18.9 Temporary Sources.

18.9.1 One permit for sources which move at least once during term of permit: A single permit may be issued authorizing emissions from similar operations by the same source owner or operator at multiple temporary locations. The operation must be temporary and involve at least one change of location during the term of the permit. No affected source shall be permitted as a temporary source. Permits for temporary sources shall include the following:

18.9.1(a) Conditions that will assure compliance with all applicable requirements at all authorized locations;

18.9.1(b) Requirements that the owner or operator notify in writing the permitting authority at least ten days in advance of each change in location; and

18.9.1(c) Conditions that assure compliance with all other provisions of this Section.

18.10 Permit Shield.

18.10.1 Except as provided in this Part, the Department may expressly include in an Operating Permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

18.10.1(a) Such applicable requirements are included and are specifically identified in the permit; or

18.10.1(b) The Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

18.10.2 An Operating Permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

18.10.3 Nothing in this Part or in any Operating Permit shall alter or affect the following:

18.10.3(a) The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;

18.10.3(b) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

18.10.3(c) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act; or

18.10.3(d) The ability of EPA to obtain information from a source pursuant to Section 114 of the Act.

18.11 Reserved. (Removed on August 14, 2024.)

18.12 Permit Issuance.

18.12.1 Initial

18.12.1(a) All major sources must be issued operating permits within 3 years of the date that EPA approves the Department's program.

18.12.1(b) At least one-third of the permits for sources subject to this Chapter must be issued each of the three years following EPA's approval of the Department's program.

18.12.1(c) If the Department is granted interim approval, then the provisions of Paragraphs (a) and (b) do not apply.

18.12.1(c)(1) During each year of interim approval, at least 20% of the permits subject to this Chapter must be issued. Thereafter, at least one-third of the remaining sources subject to this Chapter must be issued each year.

18.12.1(c)(2) If interim approval is granted, the emissions from the sources subject to this Chapter that are permitted in the first three years of the program shall amount to 80% of the emissions from all sources subject to this Chapter.

18.12.1(d) Any application for a new source must be acted on within 18 months of receiving a complete application.

18.12.2 Renewals

- 18.12.2(a)** Applications for permit renewal shall be subject to the same procedural requirements, including those for public participation, and affected State, ADEM, and EPA review, that apply to initial permit issuance under this Chapter.
- 18.12.2(b)** A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 6 months, but not more than 18 months, before the date of expiration or the Department has taken final action approving the source's application for renewal by the expiration date.
- 18.12.2(c)** If a timely and complete application for a permit renewal is submitted, but the Department fails to take final action to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.

18.13 Permit Modifications or Amendments.

18.13.1 Administrative.

18.13.1(a) An administrative permit amendment is a permit revision that:

- 18.13.1(a)(1)** Corrects typographical errors;
- 18.13.1(a)(2)** Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
- 18.13.1(a)(3)** Requires more frequent monitoring or reporting by the permittee;
- 18.13.1(a)(4)** Incorporates a general permit into an Operating Permit.
- 18.13.1(a)(5)** Allows for a change in ownership or operational control of a source where the Department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Department;
- 18.13.1(a)(6)** Incorporates into a permit issued under this Chapter the requirements from preconstruction review permits authorized under the Jefferson County Board of Health Air Pollution Control Rules and Regulations, provided that the process used meets procedural requirements substantially equivalent to the requirements of Parts 18.12 and 18.15 of this Chapter that would be applicable to the change if it were subject to review as a permit modification, and compliance requirements substantially equivalent to those contained in Parts 18.5 through 18.11 of this Chapter; or
- 18.13.1(a)(7)** Incorporates any other type of change which the Department has determined, and the Administrator has approved as part of an approved operating permit program to be similar to those in Subparagraphs 18.13.1(a)(1) through (5) above.

18.13.1(b) Administrative permit amendments for purposes of the acid rain portion of the permit shall be governed by regulations promulgated under title IV of the Act.

18.13.1(c) An administrative permit amendment may be made by the Department consistent with the following:

- 18.13.1(c)(1)** The Department shall take no more than 60 days from receipt of a request for an administrative permit amendment to take final action on such request, and may incorporate such changes without providing notice to the public or affected States provided that it designates any such permit revisions as having been made pursuant to this Section.
- 18.13.1(c)(2)** The Department shall submit a copy of the revised permit to the Administrator and to ADEM.
- 18.13.1(c)(3)** The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request.

18.13.2 Flexibility (i.e., 502(b)(10) changes):

Modifications which are not modifications under title I of the Act, that contravene an existing permit condition and do not exceed emissions allowable under the permit can be done without modifying the permit if:

- 18.13.2(a)** Written notification is given that describes the proposed change, the date of the change, any change in emissions, and any term or condition of the permit which is no longer valid due to the change; and
- 18.13.2(b)** Notice is given to the Department and EPA at least 7 days before the change is made.
- 18.13.3** Minor permit modification procedures.
- 18.13.3(a)** Criteria.
- 18.13.3(a)(1)** Minor permit modification procedures may be used only for those permit modifications that:
- 18.13.3(a)(1)(i)** Do not violate any applicable requirement;
- 18.13.3(a)(1)(ii)** Do not involve significant changes to existing monitoring, reporting, or record keeping requirements in the permit;
- 18.13.3(a)(1)(iii)** Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
- 18.13.3(a)(1)(iv)** Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
- 18.13.3(a)(1)(iv)(A)** A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of title I of the Act; and
- 18.13.3(a)(1)(iv)(B)** An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the Act;
- 18.13.3(a)(1)(v)** Are not modifications under any provision of title I of the Act; and
- 18.13.3(a)(1)(vi)** Are not required by Section 18.13.4 to be processed as a significant modification.
- 18.13.3(a)(2)** Notwithstanding Subparagraph 18.13.3(a)(1) of this regulation, minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in an applicable implementation plan or in applicable requirements promulgated by EPA.
- 18.13.3(b)** Application. An application requesting the use of minor permit modification procedures shall meet the requirements of Section 18.4.8 of this Chapter relative to the modification and shall include the following:
- 18.13.3(b)(1)** A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- 18.13.3(b)(2)** The source's suggested draft permit;
- 18.13.3(b)(3)** Certification by a responsible official, consistent with Section 18.4.9 that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
- 18.13.3(b)(4)** Completed forms for the Department to use to notify the Administrator, ADEM and affected States as required under Part 18.15 of this Chapter.
- 18.13.3(c)** EPA, ADEM and affected State notification. Within 5 working days of receipt of a complete permit modification application, the Department shall notify the Administrator, ADEM and affected States of the requested permit modification. The Department promptly shall send any notice of refusal to accept any recommendations made by the Administrator, ADEM or the affected States to the Administrator.
- 18.13.3(d)** Timetable for issuance. The Department may not issue a final permit modification until after EPA's 45-day review period or until EPA has notified the Department that EPA will not object to issuance of the permit modification, whichever is first. Within 90 days of the Department's receipt of an application under minor permit modification procedures or 15 days after the end of the Administrator's 45-day review period under Section 18.15.3, whichever is later, the Department shall:
- 18.13.3(d)(1)** Issue the permit modification as proposed;
- 18.13.3(d)(2)** Deny the permit modification application;

18.13.3(d)(3) Determine that the requested modification does not meet the minor permit modification criteria and should be reviewed under the significant modification procedures; or

18.13.3(d)(4) Revise the draft permit modification and transmit to the Administrator the new proposed permit modification as required by Section 18.15.1 of this Chapter.

18.13.3(e) Source's ability to make change.

18.13.3(e)(1) Ten days after the application has been submitted to the Department, the source may make the change for which they applied unless the change does not qualify as a minor modification. After the source makes the change allowed by the preceding sentence, and until the Department takes any of the actions specified in Subparagraphs 18.13.3(d)(1) through (4), the source must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the source need not comply with the existing permit terms and conditions it seeks to modify. However, if the source fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it.

18.13.3(e)(2) If the Department notifies the source that the modification does not qualify as a minor modification within 10 days after receiving the application, then the source shall apply for the change as a significant modification.

18.13.3(f) The permit shield under Part 18.10 of this Chapter shall not extend to minor permit modifications.

18.13.4 Significant Modifications. Modifications that are significant modifications under the PSD (Part 2.4) or nonattainment (Part 2.5) regulations or are modifications under the NSPS or NESHAPS regulations must be incorporated in the Operating Permit using the requirements for sources initially applying for an Operating Permit, including those for applications, public participation, review by affected States, review by ADEM, and review by EPA, as described in Parts 18.4 and 18.14.

18.13.5 Reopening for cause.

18.13.5(a) Each issued permit shall include provisions specifying the conditions under which the permit will be reopened prior to the expiration of the permit. A permit shall be reopened and revised under any of the following circumstances:

18.13.5(a)(1) Additional applicable requirements under the Act become applicable to a major source with a remaining permit term of 3 or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire.

18.13.5(a)(2) Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

18.13.5(a)(3) The Department, ADEM or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

18.13.5(a)(4) The Administrator, ADEM or the Department determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

18.13.5(b) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

18.13.5(c) Reopenings under Paragraph 18.13.5(a) of this Section shall not be initiated before a notice of such intent is provided to the source by the Department at least 30 days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

18.14 Off-Permit Changes.

18.14.1 Any change at a source holding an operating permit which is not addressed or prohibited in the federally enforceable terms and conditions of the permit may be designated by the owner or operator as an off-permit change, and may be made without revision to the federally enforceable terms and conditions of the operating permit, provided that the change:

18.14.1(a) shall meet all applicable requirements;

- 18.14.1(b)** does not violate any federally enforceable permit term or condition;
- 18.14.1(c)** is not subject to any requirement or standard under title IV of the Clean Air Act; and
- 18.14.1(d)** is not a modification under title I.
- 18.14.2** Designation of a change as state-only affects only the federal requirements for processing of the change under the federal operating permit program. The owner or operator must comply with all applicable state permitting and preconstruction review requirements. Any change designated as state-only will be treated as a permit revision under state permitting requirements and shall be processed in accordance with the administrative permit amendment provisions in section 18.13.1 or the minor permit modification provisions in section 18.13.3, except that the provisions of paragraph 18.13.3(d) shall not apply.
- 18.14.3** The owner or operator of any permitted source who plans to make a change meeting the criteria set forth in this part may submit a request that the Health Officer process the change application as an off-permit change, in accordance with section 18.14.2.
- 18.14.4** Any application pertaining to a change designated by the applicant as an off-permit change shall be submitted by the applicant to EPA in fulfillment of the obligation to provide written notice, provided, that no change meeting the criteria for an insignificant activity or trivial activity is subject to the procedures set forth in this part.
- 18.15 Permit Review by EPA, Affected States and Public.**
- 18.15.1** Transmission of information to EPA.
- 18.15.1(a)** The Department shall submit each application, each proposed permit and each final permit to EPA. The Department may require the applicant to submit a copy of its application directly to EPA. The Department also shall submit a copy of the draft permit to the applicant at the same time that EPA is sent a copy.
- 18.15.1(b)** Upon agreement with EPA, the Department may submit a summary of the application instead of the full application.
- 18.15.1(c)** The Department shall keep for 5 years all records of the information sent to EPA that is required in Paragraph 18.15.1(a) of this Section.
- 18.15.2** Review by Affected States.
- 18.15.2(a)** The Department shall give notice to each affected State of each draft permit on or before public notice, unless public notice is not required.
- 18.15.2(b)** The Department shall respond in writing its reasons for refusing to accept an affected State's or for refusing to accept the Administrator's recommendation.
- 18.15.3** EPA objection.
- 18.15.3(a)** If EPA objects in writing within 45 days of receipt of a proposed permit or prior to the issuance of a final permit, the Department shall not issue the permit, except the Department may issue a permit that is valid pursuant to Alabama's Air Pollution Control Act only. However, the Department shall advise the source that issuance of such permit shall not provide any protection from federal requirements.
- 18.15.3(b)** EPA's objection must include the reasons for the objection and a description of the terms that the permit must include to remedy the objections. EPA must supply the applicant with a copy of the objection.
- 18.15.3(c)** Failure of the Department to do any of the following are also grounds for objection:
- 18.15.3(c)(1)** Comply with Section 18.15.1 or 18.15.2 of this Chapter.
- 18.15.3(c)(2)** Submit any information requested by EPA in writing necessary to review the permit.
- 18.15.3(c)(3)** Process the permit under the significant permit modification procedures (unless the modification is minor).
- 18.15.4** Public participation. Except for modifications qualifying for administrative or minor permit modification procedures, all permit proceedings, including initial permit issuance, significant modifications, and renewals, shall use the following procedures for public notice:
- 18.15.4(a)** Notice shall be given by publication in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice and also to persons on a mailing list developed by the

Department for persons desiring notice of permit action, including persons who have requested in writing to be on such a list;

- 18.15.4(b)** The notice shall identify the affected facility; the name and address of the permittee; the address of the Department; the activity or activities involved in the permit action; the emissions change involved in any permit modification; the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, including any compliance plan, monitoring and compliance certification report, except for information entitled to be kept confidential, and all other materials available to the Department that are relevant to the permit decision; a brief description of the comment procedures required by this Chapter; and the time and place of any hearing that may be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled);
- 18.15.4(c)** The Department shall provide at least 30 days for public comment and shall give notice of any public hearing at least 30 days in advance of the hearing; and
- 18.15.4(d)** The Department shall keep a record of the commenters and also of the issues raised during the public participation process.

CHAPTER 19 – GENERAL CONFORMITY OF FEDERAL ACTIONS TO STATE IMPLEMENTATION PLANS

(Adopted January 10, 1996, Revised March 11, 1998; March 14, 2007; June 13, 2007; May 13, 2009; September 14, 2011; May 8, 2013; and August 14, 2024)

19.1 Transportation Conformity

The Environmental Protection Agency Regulations and the Appendices applicable thereto, governing Conformity to State Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded, or Approved Under Title 23 U.S.C. or the Federal Transit Act address (July 1, 2012), are incorporated by reference as they exist in 40 CFR §§ 93.105, 93.122(a)(4)(ii), and 93.125(c) in the Alabama State Implementation Plan as required by the Clean Air Act.

19.2 General Conformity.

The Environmental Protection Agency Regulations and the Appendices applicable thereto, governing Determining Conformity of General Federal Actions to State Implementation Plans, are incorporated by reference as they exist in 40 CFR 93 Subpart B (July 1, 2010).

CHAPTER 20 – ACID RAIN PROGRAM – PERMITS REGULATION

(Adopted January 10, 1996, Revised December 9, 1998; October 13, 1999; June 14, 2000; May 8, 2002; November 12, 2003; June 13, 2007; May 13, 2009, May 11, 2016; and August 14, 2024)

20.1 General-Permits Regulation.

20.1.1 The Environmental Protection Agency Regulations, and the Appendices applicable thereto, governing the Acid Rain Program-Permits Regulation (40 CFR, Part 72 and Appendices) are incorporated by reference as they exist in 40 CFR Part 72, (July 1, 2024), except for the provisions found in 40 CFR § 72.12 and 40 CFR §§ 72.70 through 72.74 which are excluded.

20.1.2 In the event of any inconsistency between the regulations contained in this Chapter and regulations contained in other Chapters of these rules, the provisions of this Chapter shall take precedence and shall govern the issuance, denial, revision, reopening, and renewal of the Acid Rain provisions of an operating permit.

20.1.3 Definitions. For purposes of this Chapter, the definitions listed in 40 CFR § 72.2, Subpart A, will apply.

20.2 Nitrogen Oxides Emission Reduction Program.

20.2.1 The Environmental Protection Agency Regulations, and the Appendices applicable thereto, governing the Acid Rain Nitrogen Oxides Emission Reduction Program (40 CFR, Part 76 and Appendices) are incorporated by reference as they exist in 40 CFR Part 76, (July 1, 2024), except for the references to 40 CFR 78 which are excluded.

20.2.2 In the event of any inconsistency between the regulations contained in this Chapter and regulations contained in other Chapters of these rules, the provisions of this Chapter shall take precedence and shall govern the issuance, denial, revision, reopening, and renewal of the Acid Rain provisions of an operating permit.

20.2.3 Definitions. For purposes of this Rule, the definitions listed in 40 CFR §72.2, Subpart A and §76.2, will apply.

CHAPTER 21 – CONTROL OF MUNICIPAL SOLID WASTE LANDFILL GAS EMISSIONS

(Adopted March 11, 1998; Revised October 13, 1999; June 14, 2000; May 8, 2002; and August 14, 2024)

21.1 Definitions.

For the purposes of this Chapter and Sections 13.2.75 and 13.2.76 only, the following words and phrases, unless a different meaning is plainly required by the content, shall have the following meanings:

- 21.1.1 "Active collection system" means a gas collection system that uses gas mover equipment.
- 21.1.2 "Active landfill" means a landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future.
- 21.1.3 "Closed area" means a separately lined area of an MSW landfill in which solid waste is no longer being placed. If additional solid waste is placed in that area of the landfill, that landfill area is no longer closed. The area shall be separately lined to ensure that the landfill gas does not migrate between open and closed areas.
- 21.1.4 "Closed landfill" means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under 40 CFR §60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.
- 21.1.5 "Closed landfill subcategory" means a closed landfill that has submitted a closure report as specified in Paragraph 21.3.6(f) on or before September 27, 2017.
- 21.1.6 "Closure" means that point in time when a landfill becomes a closed landfill.
- 21.1.7 "Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.
- 21.1.8 "Controlled landfill" means any landfill at which collection and control systems are required under this Chapter as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled at the time a collection and control system design plan meeting the requirements of Paragraph 21.3.1(b) is submitted.
- 21.1.9 "Corrective action analysis" means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action(s) is/are the best alternative(s), including, but not limited to, considerations of cost effectiveness, technical feasibility, safety, and secondary impacts.
- 21.1.10 "Design capacity" means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the Department, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site specific density, which must be recalculated annually.
- 21.1.11 "Disposal facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.
- 21.1.12 "Emission rate cutoff" means the threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required.
- 21.1.13 "Enclosed combustor" means an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.
- 21.1.14 "Flare" means an open combustor without enclosure or shroud.
- 21.1.15 "Gas mover equipment" means the equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.
- 21.1.16 "Gust" means the highest instantaneous wind speed that occurs over a 3-second running average.
- 21.1.17 "Household waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). Household waste does not include fully segregated yard waste. Segregated yard waste means vegetative matter resulting exclusively

from the cutting of grass, the pruning and/or removal of bushes, shrubs, and trees, the weeding of gardens, and other landscaping maintenance activities. Household waste does not include construction, renovation, or demolition wastes, even if originating from a household.

- 21.1.18** "Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include fly ash waste, bottom ash waste, boiler slag waste, or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric or steam generating plants. Additionally, this term does not include mining waste or oil and gas wastes, or small quantity generator waste as defined in ADEM Admin. Code r. 335-14-2-.01(5). Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.
- 21.1.19** "Interior Well" means any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well.
- 21.1.20** "Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under ADEM Admin. Code r. 335-13-1-.03.
- 21.1.21** "Lateral expansion" means a horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.
- 21.1.22** "Leachate recirculation" means the practice of taking the leachate collected from the landfill and reapplying it to the landfill by any of one of a variety of methods, including pre-wetting of the waste, direct discharge into the working face, spraying, infiltration ponds, vertical injection wells, horizontal gravity distribution systems, and pressure distribution systems.
- 21.1.23** "Modification" means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its design capacity as of July 17, 2014. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.
- 21.1.24** "Municipal solid waste landfill" or "MSW landfill" means an entire disposal facility in a contiguous geographic space where household waste is placed in or on land. A MSW landfill may also receive other types of RCRA Subtitle D wastes (ADEM Admin. Code r. 335-13-1-.03) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, 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.
- 21.1.25** "Municipal solid waste landfill emissions" or "MSW landfill emissions" means gas generated by the decomposition of organic waste deposited in a MSW landfill or derived from the evolution of organic compounds in the waste.
- 21.1.26** "NMOC" means nonmethane organic compounds, as measured according to the provisions of Section 21.3.3.
- 21.1.27** "Nondegradable waste" means any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.
- 21.1.28** "Passive collection system" means a gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.
- 21.1.29** "Root cause analysis" means an assessment conducted through a process of investigation to determine the primary cause, and any other contributing causes, of positive pressure at a wellhead.
- 21.1.30** "Sludge" means any nonhazardous solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.
- 21.1.31** "Solid waste" means any garbage or rubbish, construction/demolition debris, ash, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material,

including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities or materials intended for or capable of recycling, but which have not been diverted or removed from the solid waste stream. The term "solid waste" does not include recovered material, solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to National Pollutant Discharge permits under the Federal Water Pollution Control Act 33 U.S.C. 1342, as amended, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.). Also excluded from this definition are wastes from silvicultural operations, land application of crop residues, animal residues, animal manure and ash resulting exclusively from the combustion of fossil fuels or wood during normal agricultural operations or mining refuse as defined and regulated pursuant to the Alabama Mining Act.

- 21.1.32** "Sufficient density" means any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this Chapter.
- 21.1.33** "Sufficient extraction rate" means a rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.
- 21.1.34** "Treated landfill gas" means landfill gas processed in a treatment system as defined in Chapter 21.
- 21.1.35** "Treatment system" means a system that filters, de-waters, and compresses landfill gas for sale or beneficial use.
- 21.1.36** "Untreated landfill gas" means any landfill gas that is not treated landfill gas.

21.2 General Provisions.

- 21.2.1** The provisions of this Chapter apply to each existing MSW landfill for which construction, reconstruction or modification was commenced on or before July 17, 2014. Physical or operational changes made to an existing MSW landfill solely to comply with this Chapter are not considered a modification or reconstruction and would not subject an existing MSW landfill to the requirements of Subpart XXX as incorporated by reference in Section 13.2.76, [see 40 CFR §60.760 of Subpart XXX].
 - 21.2.1(a)** The requirements of this rule shall become effective upon final approval by EPA.
 - 21.2.2** Collection and control of MSW landfill emissions shall be required at each MSW landfill meeting the following four conditions:
 - 21.2.2(a)** The landfill has accepted municipal solid waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition.
 - 21.2.2(b)** The landfill has a design capacity greater than or equal to 2.5 million megagrams and 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 design capacity report; and
 - 21.2.2(c)** The landfill has a nonmethane organic compound emission rate greater than or equal to 34 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.
 - 21.2.2(d)** The landfill in the closed landfill subcategory and has an NMOC emission rate greater than or equal to 50 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.
 - 21.2.3** For the purposes of obtaining an operating permit under Chapter 18 of the Rules and Regulations, the owner or operator of a MSW landfill subject to this Chapter with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under Chapter 18, unless the landfill is otherwise subject to Chapter 18. For purposes of submitting a timely application for an operating permit, the owner or operator of a MSW landfill subject to this Chapter with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters on the effective date of EPA's approval of the state's program (December 7, 1998), and not otherwise subject to Chapter 18, becomes subject to the requirements of Chapter 18, 90 days after the effective date [March 7, 1999] of said program approval, even if the design capacity report is submitted earlier.

21.2.4 When a MSW landfill subject to this Chapter is closed as defined in this rule, the owner or operator is no longer subject to the requirement to maintain an operating permit under Chapter 18 for the landfill if the landfill is not otherwise subject to the requirements of Chapter 18 and if either of the following conditions are met.

21.2.4(a) The landfill was never subject to the requirement to install and operate a gas collection and control system under Part 21.3; or

21.2.4(b) The owner or operator meets the condition for control system removal specified in Subdivision 21.3.1(e).

21.2.5 When an MSW landfill subject to this rule is in the closed landfill subcategory, the owner or operator is not subject to the following reports of this rule, provided the owner or operator submitted these reports under the provisions of Subpart WWW as incorporated by reference in Section 13.2.75; or under the provisions of this rule on or before July 17, 2014;

21.2.5(a) Initial design capacity report specified in paragraph 21.3.6(a).

21.2.5(b) Initial or subsequent NMOC emission rate report specified in paragraph 21.3.6(c), provided that the most recent NMOC emission rate report indicated the NMOC emissions were below 50 Mg/yr.

21.2.5(c) Collection and control system design plan specified in paragraph 21.3.6(d).

21.2.5(d) Closure report specified in paragraph 21.3.6(f).

21.2.5(e) Equipment removal report specified in paragraph 21.3.6(g).

21.2.5(f) Initial annual report specified in paragraph 21.3.6(h).

21.2.5(g) Initial performance test report in paragraph 21.3.6(i).

21.3 Standards for Existing Municipal Solid Waste Landfills.

21.3.1 Standards for Air Emissions from Existing Municipal Solid Waste Landfills.

21.3.1(a) Collection system. Each MSW landfill meeting the conditions in section 21.2.2 shall install a gas collection as specified in subparagraphs 21.3.1(a)(1) through 21.3.1(a)(3).

21.3.1(a)(1) Collection system. Install and start up a collection and control system that captures the gas generated within the landfill within 30 months after:

21.3.1(a)(1)(i) The first annual report in which the NMOC emission rate equals or exceeds 34 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 34 megagrams per year, as specified in subdivision 21.3.1(d)(2)(ii); or

21.3.1(a)(1)(ii) The first annual NMOC emission rate report for a landfill in the closed landfill subcategory in which the NMOC emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 50 megagrams per year, as specified in subdivision 21.3.1(d)(3)(ii); or

21.3.1(a)(1)(iii) The most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2, if the Tier 4 surface emissions monitoring shows a surface methane emission concentration of 500 parts per million methane or greater as specified in subdivisions 21.3.1(d)(2)(iii) or 21.3.1(d)(3)(iii), as applicable.

21.3.1(a)(2) Active. An active collection system shall:

21.3.1(a)(2)(i) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control system equipment.

21.3.1(a)(2)(ii) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of 5 years or more if active; or 2 years or more if closed or at final grade

21.3.1(a)(2)(iii) Collect gas at a sufficient extraction rate.

21.3.1(a)(2)(iv) Be designed to minimize off-site migration of subsurface gas.

21.3.1(a)(3) Passive. A passive collection system shall:

- 21.3.1(a)(3)(i)** Comply with the provisions specified in subdivisions 21.3.1(a)(2)(i), (ii), and (iv).
- 21.3.1(a)(3)(ii)** Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR § 258.40.
- 21.3.1(b)** Control system. Each MSW landfill meeting the conditions in section 21.2.2 shall control gas collected from within the landfill through the use of control devices meeting the following requirements, except as provided in 40 CFR § 60.24.
- 21.3.1(b)(1)** A non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR § 60.18 except as noted in 21.3.5(c); or
- 21.3.1(b)(2)** A control system designed and operated to reduce NMOC by 98% by weight; or when an enclosed combustion device is used for control, to either reduce NMOC by 98% by weight or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen or less. The reduction efficiency or concentration in parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in paragraph 21.3.3(e). The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this Chapter.
- 21.3.1(b)(2)(i)** If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
- 21.3.1(b)(2)(ii)** The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section 21.3.5.
- 21.3.1(b)(2)(iii)** For the closed landfill subcategory, the initial or most recent performance test conducted to comply with 40 CFR 60 Subpart WWW of this; or any other requirement of this Chapter on or before July 17, 2014 is sufficient for compliance with this Chapter.
- 21.3.1(b)(3)** Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas shall be controlled according to either subparagraphs 21.3.1(b)(1) or 21.3.1(b)(2).
- 21.3.1(b)(4)** All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraphs 21.3.1(a) or 21.3.1(b). For purposes of this Chapter, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of paragraphs 21.3.1(a) or 21.3.1(b).
- 21.3.1(c)** Design capacity. Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the Director as provided in paragraph 21.3.6(a). 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. Submittal of the initial design capacity report shall fulfill the requirements of this rule except as provided for in subparagraphs 21.3.1(c)(1) and 21.3.1(c)(2).
- 21.3.1(c)(1)** The owner or operator shall submit to the Director an amended design capacity report, as provided for in subparagraph 21.3.6(b). [Guidance: Note that if the design capacity increase is the result of a modification, as defined in paragraph 21.1.23, that was commenced after July 17, 2014, the landfill will become subject to 13.2.76, 40 CFR 60, Subpart XXX. If the design capacity increase is the result of a change in operating practices, density, or some other change that is not a modification as the defined in section 21.1.23, the landfill remains subject to this Chapter.]
- 21.3.1(c)(2)** When an increase in the maximum design capacity of a landfill with an initial design capacity less than 2.5 million megagrams or 2.5 million cubic meters results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with the provisions of paragraph 21.3.1(d) below.

- 21.3.1(d)** Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either install a collection and control system as provided in paragraphs 21.3.1(a) and 21.3.1(b), comply with subparagraph 21.3.1(d)(2), or calculate an NMOC emission rate for the landfill using the procedures specified in paragraph 21.3.3(a). The NMOC emission rate shall be recalculated annually, except as provided in subparagraph 21.3.1(d)(1). The owner or operator of an MSW landfill subject to this Chapter with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to major source operating permitting requirements in Chapter 18.
- 21.3.1(d)(1)** If the calculated NMOC emission rate is less than 34 megagrams per year, the owner or operator shall:
- 21.3.1(d)(1)(i)** Submit an annual NMOC emission report to the Health Officer, except as provided for in subparagraph 21.3.1(d)(1); and
- 21.3.1(d)(1)(ii)** Recalculate the NMOC emission rate annually using the procedures specified in paragraph 21.3.3(a) until such time as the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, or the landfill is closed.
- 21.3.1(d)(1)(ii)(A)** If the NMOC emission rate, upon initial calculation or annual recalculation required in subdivision 21.3.1(d)(1)(ii), is equal to or greater than 34 megagrams per year, the owner or operator shall install a collection and control system in compliance with section 21.3.1; calculate NMOC emission using the next higher tier in section 21.3.3; or conduct a surface emission monitoring demonstration using the procedures specified in subparagraph 21.3.3(a)(6).
- 21.3.1(d)(1)(ii)(B)** If the landfill is permanently closed, a closure report shall be submitted to the Director as provided for in paragraph 21.3.6(f), except for exemption allowed under 21.2.5(d).
- 21.3.1(d)(1)(ii)(C)** For the closed landfill subcategory, if the most recently calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall either: Submit a gas collection and control system design plan as specified in paragraph 21.3.6(d), except for exemptions allowed under paragraph 21.2.5(c), and install a collection and control system as provided in paragraphs 21.3.1(a) and (b); calculate NMOC emissions using the next higher tier in paragraph 21.3.3(a); or conduct a surface emission monitoring demonstration using the procedures specified in subparagraph 21.3.3(a)(6).
- 21.3.1(d)(2)** If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either:
- 21.3.1(d)(2)(i)** Submit a collection and control system design plan prepared by a professional engineer to the Director within 1 year as specified in paragraph 21.3.6(d), except for exemptions allowed under paragraph 21.2.5(c);
- 21.3.1(d)(2)(ii)** Calculate NMOC emissions using a higher tier in section 21.3.3; or
- 21.3.1(d)(2)(iii)** Conduct a surface emission monitoring demonstration using the procedures specified in paragraph 21.3.3(a)(6).
- 21.3.1(d)(3)** For the closed landfill subcategory, if the calculated NMOC emission rate is equal to or greater than 50 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either:
- 21.3.1(d)(3)(i)** Submit a collection and control system design plan as specified in paragraph 21.3.6(d), except for exemptions allowed under paragraph 21.2.5(c);
- 21.3.1(d)(3)(ii)** Calculate NMOC emissions using a higher tier in paragraph 21.3.3(a); or
- 21.3.1(d)(3)(iii)** Conduct a surface emission monitoring demonstration using the procedures specified in subparagraph 21.3.3(a)(6).
- 21.3.1(e)** Removal criteria. The collection and control system may be capped, removed, or decommissioned provided that the following criteria are met:
- 21.3.1(e)(1)** The landfill is a closed landfill as defined in section 21.1.4. A closure report shall be submitted to the Director as provided in paragraph 21.3.6(f);
- 21.3.1(e)(2)** The collection and control system shall have been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.

21.3.1(e)(3) Following the procedures specified in paragraph 21.3.3(b), the calculated NMOC gas produced by the landfill shall be less than 34 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

21.3.1(e)(4) For the closed landfill subcategory (as defined in rule 21.1.5, following the procedures specified in paragraph 21.3.3(b), the calculated NMOC emission rate at the landfill is less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

21.3.2 Operational Standards for Collection and Control Systems.

For a MSW landfill with a gas collection and control system used to comply with paragraphs 21.3.1(a) and (b), the owner or operator of an MSW landfill shall operate the gas collection and control system in accordance with the operational standards in this paragraph (as well as the provisions in sections 21.3.4 and 21.3.5, or the operational standards in 40 CFR § 63.1958, as incorporated by reference under section 14.5.78 (as well as the provisions in 40 CFR §§ 63.1960 and 63.1961), or both as alternative means of compliance. Once the owner or operator begins to comply with the provisions of 40 CFR §63.1958, the owner or operator shall continue to operate the collection and control device according to those provisions and cannot return to the provisions of this section. Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of paragraphs 21.3.1(a) and (b) shall:

21.3.2(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for:

21.3.2(a)(1) 5 years or more if active; or

21.3.2(a)(2) 2 years or more if closed or at final grade;

21.3.2(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

21.3.2(b)(1) a fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in paragraph 21.3.6(h);

21.3.2(b)(2) use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan;

21.3.2(b)(3) a decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Health Officer as specified in 21.3.6(d);

21.3.2(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131 °F). The owner or operator may establish a higher operating temperature value at a particular well. A higher operating value demonstration shall be submitted to the Health Officer for approval and shall include supporting data demonstrating that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens. The demonstration shall satisfy both criteria in order to be approved (i.e., neither causing fires nor killing methanogens is acceptable).

21.3.2(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing the owner or operator shall conduct surface using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph 21.3.4(d). Testing shall be performed around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30 meter intervals, at all cover penetrations, and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. Thus the owner or operator shall monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

21.3.2(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with paragraph 21.3.1(b). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour of the collection or control system not operating.

21.3.2(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

21.3.2(g) If monitoring demonstrates that the operational requirement in Paragraphs 21.3.2(b), (c), or (d) are not met, corrective action shall be taken as specified in Subparagraphs 21.3.4(a)(3) through (5) or Paragraph 21.3.4(c). If corrective actions are taken as specified in Section 21.3.4, the monitored exceedance is not a violation of the operational requirements in this rule.

21.3.3 Test Methods and Procedures.

21.3.3(a) *NMOC Emission Rate.* The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in subparagraph 21.3.3(a)(1) or the equation provided in Subdivision 21.3.3(a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in subparagraph 21.3.3(a)(1), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in Subdivision 21.3.3(a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k , 170 cubic meters per megagram for L_O , and 4,000 parts per million by volume as hexane for the C_{NMOC} . For landfills located in geographical areas with a 30-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year.

21.3.3(a)(1) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^n 2kL_O M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where:

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

k = Methane generation rate constant, year⁻¹

L_O = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} Section, megagrams

t_i = age of the i^{th} Section, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

3.6×10^{-9} = conversion factor

21.3.3(a)(1)(i) The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation of the nature and amount of such waste is maintained.

21.3.3(a)(1)(ii) The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown.

$$M_{NMOC} = 2L_O R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

L_O = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of landfill, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

c = time since closure, years. For active landfill $c = 0$ and $e^{-kc} = 1$

3.6×10^{-9} = conversion factor

- 21.3.3(a)(1)(iii)** The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating a value for R , if the documentation of the nature and amount of such wastes is maintained.
- 21.3.3(a)(2)** Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 34 megagrams per year.
- 21.3.3(a)(2)(i)** If the NMOC emission rate calculated in Subparagraph 21.3.3(a)(1) is less than 34 megagrams per year, then the landfill owner shall submit an emission rate report as provided in Subparagraph 21.3.6(c), and shall recalculate the NMOC mass emission rate annually as required under Subparagraph 21.3.1(d)(1).
- 21.3.3(a)(2)(ii)** If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, then the landfill owner shall either:
- 21.3.3(a)(2)(ii)(A)** Submit a gas collection and control system design plan within 1 year as specified in paragraph 21.3.6(d), and install and operate a gas collection and control system within 30 months according to subparagraphs 21.3.1(a) and (b); or
- 21.3.3(a)(2)(ii)(B)** Determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the Tier 2 procedures provided in Subparagraph 21.3.3(a)(3); or
- 21.3.3(a)(2)(ii)(C)** Determine a site-specific methane generation rate constant and recalculate the NMOC emission rate using the Tier 3 procedures provided in subparagraph 21.3.3(a)(4).
- 21.3.3(a)(3)** Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare, evenly distributed over the landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The probes should be evenly distributed across the sample area. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A (40 CFR 60). Taking composite samples from different probes into a single cylinder is allowed; however, equal volumes shall be taken from each sample probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements shall be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If more than the required number of samples is taken, all samples shall be used in the analysis. The landfill owner or operator shall divide the NMOC concentration from Method 25 or 25C by six to convert from CNMOC as carbon to CNMOC as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe. The sample location on the common header pipe shall be before any gas moving, condensate removal, or treatment system equipment. For active collection systems, a minimum of three samples shall be collected from the header pipe.

[NOTE: Test Methods found in Appendix A of 40 CFR 60 are incorporated by reference in Chapter 13.]

- 21.3.3(a)(3)(i)** Within 60 days after the date of determining the NMOC concentration and corresponding NMOC emission rate, the owner or operator shall submit the results according to subparagraph 21.3.6(j)(2).
- 21.3.3(a)(3)(ii)** The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in 21.3.3(a)(1) or (a)(1)(ii) and using the average site-specific NMOC concentration from the collected samples instead of the default value in the equation provided in subparagraph 21.3.3(a)(1).
- 21.3.3(a)(3)(iii)** If the resulting NMOC mass emission rate calculated using the Tier 2 site-specific NMOC concentration is equal to or greater than 34 megagrams per year, then the landfill owner or operator shall either:
- 21.3.3(a)(3)(iii)(A)** Submit a gas collection and control system design plan within 1 year as specified in subparagraph 21.3.6(d), and install and operate a gas collection and control system within 30 months according to subparagraphs 21.3.1(a) and (b);

- 21.3.3(a)(3)(iii)(B)** Determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the Tier 3 procedures specified in Subparagraph 21.3.3(a)(4); or
- 21.3.3(a)(3)(iv)** Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in subparagraph 21.3.3(a)(6).
- 21.3.3(a)(3)(v)** Tier 3. If the resulting NMOC mass emission rate is less than 34 megagrams per year, the owner or operator shall submit a periodic estimate of the NMOC emissions in an NMOC emission rate report as provided in Subparagraph 21.3.6(c) and shall recalculate the NMOC mass emission rate annually as required under 21.3.1(d)(1). The site-specific NMOC concentration shall be retested every 5 years using the methods specified in this paragraph.
- 21.3.3(a)(4)** Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of Appendix A. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in Subdivisions 21.3.3(a)(1) or (ii) and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in Subparagraph 21.3.3(a)(3) instead of the default values provided in Subparagraph 21.3.3(a)(1). The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 34 megagrams per year.
- 21.3.3(a)(4)(i)** If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 34 megagrams per year, the owner or operator shall either:
- 21.3.3(a)(4)(i)(A)** Submit a gas collection and control system design plan within 1 year as specified in subparagraph 21.3.6(c), and install and operate a gas collection and control system within 30 months according to subparagraphs 21.3.1(a) and (b); or
- 21.3.3(a)(4)(i)(B)** Conduct a surface emission monitoring demonstration using the Tier 4 procedures specified in section 21.3.6.
- 21.3.3(a)(4)(ii)** If the NMOC mass emission rate is less than 34 megagrams per year, then the owner or operator shall recalculate the NMOC mass emission rate annually using either equation in Subparagraph 21.3.3(a)(1), the site-specific Tier 3 methane generation rate constant, and the Tier 2 NMOC concentration obtained in Subparagraph 21.3.3(a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.
- 21.3.3(a)(5)** Other methods. The owner or operator may use other methods to determine the NMOC concentration or a site specific k as an alternative to the methods required in Subparagraphs 21.3.3(a)(3) and (4) if the method has been approved by the Administrator.
- 21.3.3(a)(6)** Tier 4. The landfill owner or operator shall demonstrate that surface methane emissions are below 500 parts per million. Surface emission monitoring shall be conducted on a quarterly basis using the following procedures. Tier 4 is allowed only if the landfill owner or operator can demonstrate that NMOC emissions are greater than or equal to 34 Mg/yr but less than 50 Mg/yr using Tier 1 or Tier 2. If both Tier 1 and Tier 2 indicate NMOC emissions are 50 Mg/yr or greater, then Tier 4 cannot be used. In addition, if the landfill has installed and operates a collection and control system not required by this chapter, the landfill shall meet the criteria in subdivision 21.3.3(a)(6)(viii).
- 21.3.3(a)(6)(i)** The owner or operator shall measure surface concentrations of methane along the entire perimeter of the landfill and along a pattern that traverses the landfill at no more than 30-meter intervals using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph 21.3.4(d).
- 21.3.3(a)(6)(ii)** The background concentration shall be determined by moving the probe inlet upwind and downwind at least 30 meters from the waste mass boundary of the landfill.
- 21.3.3(a)(6)(iii)** Surface emission monitoring shall be performed in accordance with section 8.3.1 of Method 21 of 40 CFR 60, Appendix A, except that the probe inlet shall be placed no more than 5 centimeters above the landfill surface; the constant measurement of distance above the surface should be based on a mechanical device such as with a wheel on a pole.

- 21.3.3(a)(6)(iii)(A)** The owner or operator shall use a wind barrier, similar to a funnel, when onsite average wind speed exceeds 4 miles per hour or 2 meters per second or gust exceeding 10 miles per hour. Average on-site wind speed shall also be determined in an open area at 5-minute intervals using an on-site anemometer with a continuous recorder and data logger for the entire duration of the monitoring event. The wind barrier shall surround the SEM monitor, and shall be placed on the ground, to ensure wind turbulence is blocked. SEM cannot be conducted if average wind speed exceeds 25 miles per hour.
- 21.3.3(a)(6)(iii)(B)** Landfill surface areas where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover, and all cover penetrations shall also be monitored using a device meeting the specifications provided in paragraph 21.3.4(d).
- 21.3.3(a)(6)(iv)** Each owner or operator seeking to comply with the Tier 4 provisions in subparagraph 21.3.3(a)(6) shall maintain records of surface emission monitoring as provided in paragraph 21.3.7(g), and submit a Tier 4 surface emissions report as provided in subdivision 21.3.6(d)(4)(iii).
- 21.3.3(a)(6)(v)** If there is any measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator shall submit a gas collection and control system design plan within 1 year of the first measured concentration of methane of 500 parts per million or greater from the surface of the landfill according to paragraph 21.3.6(d) and install and operate a gas collection and control system according to paragraphs 21.3.1(a) and 21.3.1(b) within 30 months of the most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2.
- 21.3.3(a)(6)(vi)** If after four consecutive quarterly monitoring periods at a landfill, other than a closed landfill, there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator shall continue quarterly surface emission monitoring using the methods specified in this paragraph.
- 21.3.3(a)(6)(vii)** If after four consecutive quarterly monitoring periods at a closed landfill there is no measured concentration of methane of 500 parts per million or greater from the surface of the landfill, the owner or operator shall conduct annual surface emission monitoring using the methods specified in paragraph 21.3.3(a)(6).
- 21.3.3(a)(6)(viii)** If a landfill has installed and operates a collection and control system that is not required by this Chapter, then the collection and control system shall meet the following criteria:
- 21.3.3(a)(6)(viii)(A)** The gas collection and control system shall have operated for at least 6,570 out of 8,760 hours preceding the Tier 4 surface emissions monitoring demonstration.
- 21.3.3(a)(6)(viii)(B)** During the Tier 4 surface emissions monitoring demonstration, the gas collection and control system shall operate as it normally would to collect and control as much landfill gas as possible.
- 21.3.3(b)** After the installation and startup of a collection and control system in compliance with Section 21.3.4, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be capped, removed or decommissioned as provided in Subdivision 21.3.1(e), using the following equation:

$$M_{NMOC} = 1.89 \times 10^{-3} (Q_{LFG})(C_{NMOC})$$

where,

M_{NMOC} = Mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

- 21.3.3(b)(1)** The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of Section 10 of Method 2E of 40 CFR 60, Appendix A.
- 21.3.3(b)(2)** The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25 or 25C or Method 18 of 40 CFR 60, Appendix A. If using Method 18, the minimum

list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25 or 25C by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

- 21.3.3(b)(3)** The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Health Officer.
- 21.3.3(b)(3)(i)** Within 60 days after the date of calculating the NMOC emission rate for purposes of determining when the system can be capped or removed, the owner or operator shall submit the results according to subparagraph 21.3.6(j)(2).
- 21.3.3(b)(3)(ii)** [Reserved.]
- 21.3.3(c)** When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this Chapter shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in Subparagraph 2.4.2(w) of these rules and regulations using AP-42 or other approved measurement procedures.
- 21.3.3(d)** For the performance test required in subparagraph 21.3.1(b)(1), the net heating value of the combusted landfill gas as determined in 40 CFR §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR § 60.18(f)(4).
- 21.3.3(d)(1)** Within 60 days after the date of completing each performance test (as defined in 40 CFR § 60.8), the owner or operator shall submit the results of the performance tests required by paragraph 21.3.3(b) or 21.3.3(d), including any associated fuel analyses, according to subparagraph 21.3.6(i)(1).
- 21.3.3(d)(2)** [Reserved.]
- 21.3.3(e)** For the performance test required in subparagraph 21.3.1(b)(2) paragraph 21.3.5(b), Method 25 or 25C or Method 18 (Method 25C may be used at the inlet only) shall be used to determine compliance with 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Health Officer as provided by subparagraph 21.3.6(d)(2). If using Method 18, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). Method 3, 3A, or 3C shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. Method 18 may be used in conjunction with Method 25A on a limited basis (compound specific, e.g., methane) or Method 3C may be used to determine methane. The methane as carbon should be subtracted from the Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landfill owner or operator shall divide the NMOC concentration as carbon by 6 to convert the C_{NMOC} as carbon to C_{NMOC} as hexane. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = \frac{(NMOC_{in} - NMOC_{out})}{NMOC_{in}}$$

where,

$NMOC_{in}$ = mass of NMOC entering control device

$NMOC_{out}$ = mass of NMOC exiting control device

- 21.3.3(e)(1)** Within 60 days after the date of completing each performance test (as defined in 40 CFR § 60.8), the owner or operator shall submit the results of the performance tests, including any associated fuel analyses, according to subparagraph 21.3.6(j)(1).
- 21.3.3(e)(2)** [Reserved.]

21.3.4 Compliance Provisions. For an MSW landfill with a gas collection and control system used to comply with paragraphs 21.3.1(a) and 21.3.1(b), the owner or operator shall operate the gas collection and control system in accordance with the compliance provisions in this section (as well as the provisions in sections 21.3.2 and 21.3.5,

or the compliance provisions in 40 CFR §63.1960, as incorporated by reference under section 14.5.78 (as well as the provisions in 40 CFR §§ 63.1958 and 63.1961, as incorporated by reference under section 14.5.78), or both as alternative means of compliance. For a MSW landfill with a gas collection and control system used to comply with the provisions of paragraphs 21.3.1(a) and 21.3.1(b), once the owner or operator begins to comply with the provisions of 40 CFR § 63.1960, as incorporated by reference under section 14.5.78), the owner or operator shall continue to operate the collection and control device according to those provisions and cannot return to the provisions of section 21.3.4.

21.3.4(a) Except as provided in subparagraph 21.3.1(d)(2), the specified methods in Subparagraphs 21.3.4(a)(1) through (a)(6) shall be used to determine whether the gas collection system is in compliance with subparagraph 21.3.1(b)(2).

21.3.4(a)(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with paragraph 21.3.8(c), one of the following equations shall be used. The k and L_0 kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the Health Officer. If k has been determined as specified in Subparagraph 21.3.3(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

21.3.4(a)(1)(i) For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_0R(e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_0 = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = the age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years. For active landfill $c = 0$ and $e^{-kc} = 1$

21.3.4(a)(1)(ii) For sites with known year-to-year solid waste acceptance rate:

$$Q_m = \sum_{i=1}^n 2kL_0M_i(e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year⁻¹

L_0 = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} Section, megagrams

t_i = age of the i^{th} Section, years

21.3.4(a)(1)(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in subdivisions 21.3.4(a)(1)(i) and 21.3.4(a)(1)(ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in subdivisions 21.3.4(a)(1)(i) or 21.3.4(a)(1)(ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

- 21.3.4(a)(2)** For the purposes of determining sufficient density of gas collectors for compliance with paragraph 21.3.8(a), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Health Officer, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
- 21.3.4(a)(3)** For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with paragraph 21.3.8(b), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under Paragraph 21.3.2(b). Any attempted corrective measure shall not cause exceedances of other operational or performance standards.
- 21.3.4(a)(3)(i)** If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator shall conduct a root cause analysis and correct the exceedance as soon as practicable, but not later than 60 days after positive pressure was first measured. The owner or operator shall keep records according to subparagraph 21.3.7(e)(4).
- 21.3.4(a)(3)(ii)** If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator shall also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) or positive pressure. The owner or operator shall submit the items listed in subparagraph 21.3.6(h)(7) as part of the next annual report. The owner or operator shall keep records according to subparagraph 21.3.7(e)(4).
- 21.3.4(a)(3)(iii)** If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator shall submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Health Officer, according to paragraph 21.3.6(k). The owner or operator shall keep records according to subparagraph 21.3.7(e)(5).
- 21.3.4(a)(4)** [Reserved.]
- 21.3.4(a)(5)** For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature as provided in Paragraph 21.3.2(c). If a well exceeds the operating parameter for temperature, action shall be initiated to correct the exceedance within 5 calendar days. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.
- 21.3.4(a)(5)(i)** If a landfill gas temperature less than 55 degrees Celsius (131 degrees Fahrenheit) cannot be achieved within 15 calendar days of the first measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit), the owner or operator shall conduct a root cause analysis and correct the exceedance as soon as practicable, but no later than 60 days after a landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) was first measured. The owner or operator shall keep records according to subparagraph 21.3.7(e)(4).
- 21.3.4(a)(5)(ii)** If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator shall also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator shall submit the items listed in subparagraph 21.3.6(h)(7), as part of the next annual report. The owner or operator shall keep records according to subparagraph 21.3.7(e)(4).
- 21.3.4(a)(5)(iii)** If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator shall submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Director, according to paragraph 21.3.6(k). The owner or operator shall keep records according to subparagraph 21.3.7(e)(5).
- 21.3.4(a)(6)** An owner or operator seeking to demonstrate compliance with 21.3.1(a)(2)(iv) through the use of a collection system not conforming to the specifications provided in Section 21.3.8 shall provide information satisfactory to the Health Officer as specified in paragraph 21.3.5(e) and subparagraph 21.3.6(d)(2) demonstrating that off-site migration is being controlled.

- 21.3.4(b)** For purposes of compliance with Paragraph 21.3.2(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in Subdivision 21.3.1(d)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:
- 21.3.4(b)(1)** 5 years or more if active; or
- 21.3.4(b)(2)** 2 years or more if closed or at final grade.
- 21.3.4(c)** The following procedures shall be used for compliance with the surface methane operational standard as provided in Paragraph 21.3.2(d).
- 21.3.4(c)(1)** After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in Paragraph 21.3.4(d).
- 21.3.4(c)(2)** The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.
- 21.3.4(c)(3)** Surface emission monitoring shall be performed in accordance with Section 8.3.1 of Method 21 of Appendix A, 40 CFR 60, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
- 21.3.4(c)(4)** Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in Subdivisions 21.3.4(c)(4)(i) through (v) below shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of Paragraph 21.3.2(d).
- 21.3.4(c)(4)(i)** The location of each monitored exceedance shall be marked and the location recorded. For location, the owner or operator shall determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates shall be in decimal degrees with at least five decimal places.
- 21.3.4(c)(4)(ii)** Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance.
- 21.3.4(c)(4)(iii)** If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action specified in Subdivision 21.3.4(c)(4)(v) shall be taken, and no further monitoring of that location is required until the action specified in Subdivision 21.3.4(c)(4)(v) has been taken.
- 21.3.4(c)(4)(iv)** Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in Subdivision 21.3.4(c)(4)(ii) or (iii) shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in Subdivision 21.3.4(c)(4)(iii) or 21.3.4(c)(4)(v) shall be taken.
- 21.3.4(c)(4)(v)** For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Health Officer for approval.
- 21.3.4(c)(5)** The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- 21.3.4(d)** Each owner or operator seeking to comply with the provisions in Paragraph 21.3.4(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

- 21.3.4(d)(1)** The portable analyzer shall meet the instrument specifications provided in Section 6 of Method 21 of Appendix A, except that "methane" shall replace all references to VOC.
- 21.3.4(d)(2)** The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
- 21.3.4(d)(3)** To meet the performance evaluation requirements in Section 8.1 of Method 21 of Appendix A, the instrument evaluation procedures of Sections 8.1.1, 8.1.2 and 8.1.3 of Method 21 of Appendix A shall be used.
- 21.3.4(d)(4)** The calibration procedures provided in Sections 8 and 10 of Method 21 of Appendix A shall be followed immediately before commencing a surface monitoring survey.
- 21.3.4(e)** The provisions of this Paragraph apply at all times, including periods of start-up, shutdown, or malfunction. During periods of startup, shutdown, and malfunction, the owner or operator shall comply with the work practice specified in paragraph 21.3.2(e), in lieu of the compliance provisions in 21.3.4.

21.3.5 Monitoring of Operations.

For an MSW landfill with a gas collection and control system used to comply with paragraphs 21.3.1(a) and 21.3.1(b), the owner or operator shall operate the gas collection and control system in accordance with the monitoring provisions in this section (as well as the provisions in sections 21.3.2 and 21.3.4, except as provided in subparagraphs 21.3.6(d)(2), or the monitoring provisions in 40 CFR § 63.1961, as incorporated by reference under section 14.5.78 (as well as the provisions in 40 CFR §§ 63.1958 and 63.1960, as incorporated by reference under section 14.5.78), or both as alternative means of compliance. Once the owner or operator begins to comply with the provisions of 40 CFR § 63.1961, as incorporated by reference under section 14.5.78, the owner or operator shall continue to operate the collection and control device according to those provisions and cannot return to the provisions of this paragraph. Except as provided in subparagraph 21.3.6(d)(2),

- 21.3.5(a)** Each owner or operator seeking to comply with subparagraph 21.3.1(a)(2) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:
 - 21.3.5(a)(1)** Measure the gauge pressure in the gas collection header on a monthly basis as provided in subparagraph 21.3.4(a)(3); and
 - 21.3.5(a)(2)** Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as follows:
 - 21.3.5(a)(2)(i)** The nitrogen level shall be determined using Method 3C, unless an alternative test method is established as allowed by paragraph 21.3.6(d).
 - 21.3.5(a)(2)(ii)** Unless an alternative test method is established as allowed by paragraph 21.3.6(d), the oxygen level shall be determined by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (incorporated by reference, see 40 CFR § 60.17). Determine the oxygen level by an oxygen meter using Method 3A, 3C, or ASTM D6522-11 (if sample location is prior to combustion) except that:
 - 21.3.5(a)(2)(ii)(A)** The span shall be set between 10 and 12 percent oxygen;
 - 21.3.5(a)(2)(ii)(B)** A data recorder is not required;
 - 21.3.5(a)(2)(ii)(C)** Only two calibration gases are required, a zero and span;
 - 21.3.5(a)(2)(ii)(D)** A calibration error check is not required; and
 - 21.3.5(a)(2)(ii)(E)** The allowable sample bias, zero drift, and calibration drift are ± 10 percent.
 - 21.3.5(a)(2)(iii)** A portable gas composition analyzer may be used to monitor the oxygen levels provided:
 - 21.3.5(a)(2)(iii)(A)** The analyzer is calibrated; and
 - 21.3.5(a)(2)(iii)(B)** The analyzer meets all quality assurance and quality control requirements for Method 3A or ASTM D6522-11 (incorporated by reference, see 40 CFR § 60.17).
 - 21.3.5(a)(3)** Monitor temperature of the landfill gas on a monthly basis as provided in Subparagraph 21.3.4(a)(5). The temperature measuring device shall be calibrated annually using the procedure in this 40 CFR Part 60, Appendix A-1, Method 2, Section 10.3.

- 21.3.5(b)** Each owner or operator seeking to comply with Subdivision 21.3.1(b) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.
- 21.3.5(b)(1)** A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 °C, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than 44 megawatts.
- 21.3.5(b)(2)** A device that records flow to the control device and bypass of the control device (if applicable). The owner or operator shall either:
- 21.3.5(b)(2)(i)** Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
- 21.3.5(b)(2)(ii)** Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- 21.3.5(c)** Each owner or operator seeking to comply with paragraph 21.3.1(b) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
- 21.3.5(c)(1)** A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.
- 21.3.5(c)(2)** A device that records flow to the flare and bypass of the flare (if applicable). The owner or operator shall either:
- 21.3.5(c)(2)(i)** Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; or
- 21.3.5(c)(2)(ii)** Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- 21.3.5(d)** Each owner or operator seeking to demonstrate compliance with paragraph 21.3.1(b) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Health Officer as provided in subparagraph 21.3.6(c)(2) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Health Officer shall review the information and either approve it, or request that additional information be submitted. The Health Officer may specify additional appropriate monitoring procedures.
- 21.3.5(e)** Each owner or operator seeking to install a collection system that does not meet the specifications in Section 21.3.8 or seeking to monitor alternative parameters to those required by Sections 21.3.2 through 21.3.5 shall provide information satisfactory to the Health Officer as provided in subparagraphs 21.3.6(c)(2) and 21.3.6(c)(3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Health Officer may specify additional appropriate monitoring procedures.
- 21.3.5(f)** Each owner or operator seeking to demonstrate compliance with the 500 parts per million surface methane operational standard in 21.3.2(d) shall monitor surface concentrations of methane according to the procedures provided in Paragraph 21.3.4(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in Paragraph 21.3.4(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.
- 21.3.5(g)** Each owner or operator seeking to demonstrate compliance with the control system requirements in paragraph 2.3.1(b), using a landfill gas treatment system shall maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in subdivision 21.3.7(b)(5)(ii) and shall calibrate, maintain, and operate according to the manufacturer's

specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The owner or operator shall:

- 21.3.5(g)(1)** Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes; and
- 21.3.5(g)(2)** Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- 21.3.5(h)** The monitoring requirements of paragraphs 21.3.5(b), 21.3.5(c), 21.3.5(d) and 21.3.5(g) apply at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator shall complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

21.3.6 Reporting Requirements.

Except as provided in 40 CFR § 60.24 and in subparagraph 21.3.6(d)(2),

- 21.3.6(a)** Design capacity report. Each owner or operator subject to the requirements of this Chapter shall submit an initial design capacity report to the Health Officer.
 - 21.3.6(a)(1)** The initial design capacity report shall fulfill the requirements of the notification of the date construction is commenced as required under 40 CFR §60.7(a)(1) and shall be submitted no later than 90 days from the effective date of these rules .
 - 21.3.6(a)(2)** The initial design capacity report shall contain the following information:
 - 21.3.6(a)(2)(i)** A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provisions of the State permit;
 - 21.3.6(a)(2)(ii)** The maximum design capacity of the landfill. Where the maximum design capacity is specified in the State permit, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation shall include a site-specific density, which shall be recalculated annually. Any density conversions shall be documented and submitted with the design capacity report. The Health Officer may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.
 - 21.3.6(a)(3)** If a facility has submitted an initial design capacity report and an initial NMOC emission rate report to the EPA as required by 40 CFR Part 62, Subpart OOO, a copy of that report may be submitted to the Department in lieu of the initial reports required in subparagraph 21.3.6(a)(2) and paragraph 21.3.6(c).
- 21.3.6(b)** Amended design capacity report. An amended design capacity report shall be submitted to the Health Officer providing notification of any increase in the design capacity of the landfill, within 90 days of an increase in the maximum design capacity of the landfill to meet or exceed 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in Paragraph 21.3.7(f).
- 21.3.6(c)** NMOC emission rate report. Each owner or operator of an existing MSW landfill subject to the requirements of this Chapter with a design capacity equal to or greater than 2.5million megagrams and 2.5 million cubic meters shall submit an NMOC emission rate report to the Health Officer annually following the procedure specified in subparagraph 21.3.6(j)(2), except as provided for in Subparagraph 21.3.6(b)(3). The Health Officer may request such additional information as may be necessary to verify the reported NMOC emission rate.

- 21.3.6(c)(1)** The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in Paragraphs 21.3.3(a) or 21.3.3(b), as applicable.
- 21.3.6(c)(2)** The NMOC emission rate report shall be submitted following the procedure specified in subparagraph 21.3.6(j)(2) no later than 90 days from the effective date of these rules . The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
- 21.3.6(c)(3)** If the estimated NMOC emission rate as reported in the annual report to the Health Officer is less than 34 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit following the procedure specified in subparagraph 21.3.6(j)(2) an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Health Officer. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Health Officer. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
- 21.3.6(c)(4)** Each owner or operator subject to the requirements of this Chapter is exempted from the requirement to submit an NMOC emission rate report after the installation of a collection and control system in compliance with paragraphs 21.3.1(a) and 21.3.1(b) during such time as the collection and control system is in operation and in compliance with Sections 21.3.2 and 21.3.4.
- 21.3.6(c)(5)** If a facility has submitted an initial design capacity report and an initial NMOC emission rate report to the EPA as required by 40 CFR Part 62, Subpart OOO, a copy of that report may be submitted to the Department in lieu of the initial reports required in paragraphs 21.3.6(a) and 21.3.6(c).
- 21.3.6(d)** Collection and control system design plan. A design plan for each gas collection and control system shall be prepared and approved by a professional engineer and shall meet the following requirements:
- 21.3.6(d)(1)** The collection and control system as described in the design plan shall meet the design requirements in paragraphs 21.3.1(a) and 21.3.1(b).
- 21.3.6(d)(2)** The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping, or reporting provisions of sections 21.3.4 through 21.3.7, proposed by the owner or operator.
- 21.3.6(d)(3)** The collection and control system design plan shall either conform to specifications for active collection systems in section 21.3.8, or include a demonstration to the Health Officer's satisfaction of the sufficiency of the alternative provisions to section 21.3.8.
- 21.3.6(d)(4)** Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters shall submit a collection and control system design plan cover page that contains the engineer's seal to the Health Officer within 1 year of the first NMOC emission rate report in which the emission rate equal to or exceeds 34 megagrams per year, except as follows:
- 21.3.6(d)(4)(i)** If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in Subparagraph 21.3.3(a)(3) and the resulting rate is less than 34 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 34 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted following the procedures in subparagraph 21.3.6(j)(2) within 180 days of the first calculated exceedance of 34 megagrams per year.
- 21.3.6(d)(4)(ii)** If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in Subparagraph 21.3.3(a)(4), and the resulting NMOC emission rate is less than 34 Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of Subparagraph 21.3.3(a)(4) and the resulting site-specific methane

generation rate constant (k) shall be submitted to the Health Officer within 1 year of the first calculated emission rate exceeding 34 megagrams per year.

- 21.3.6(d)(4)(iii)** If the owner or operator elects to demonstrate that site-specific surface methane emissions are below 500 parts per million methane, based on the provisions of subparagraph 21.3.3(a)(6), then the owner or operator shall submit annually a Tier 4 surface emissions report following the procedure specified in subparagraph 21.3.6(j)(2) until a surface emissions readings of 500 parts per million methane or greater is found. If the Tier 4 surface emissions report shows no surface emissions readings of 500 parts per million methane or greater for four consecutive quarters at a closed landfill, then the landfill owner or operator may reduce Tier 4 monitoring from a quarterly to an annual frequency. The Health Officer may request such additional information as may be necessary to verify the reported instantaneous surface emission readings. The Tier 4 surface emissions report shall clearly identify the location, date and time (to the nearest second), average wind speeds including wind gusts, and reading (in parts per million) of any value 500 parts per million methane or greater, other than non-repeatable, momentary readings. For location, the owner or operator shall determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates shall be in decimal degrees with at least five decimal places. The Tier 4 surface emission report should also include the results of the most recent Tier 1 and Tier 2 results in order to verify that the landfill does not exceed 50 Mg/yr of NMOC.
- 21.3.6(d)(4)(iii)(A)** The initial Tier 4 surface emissions report shall be submitted annually, starting within 30 days of completing the fourth quarter of Tier 4 surface emissions monitoring that demonstrates that site-specific surface methane emissions are below 500 parts per million methane, and following the procedure specified in subparagraph 21.3.6(j)(2).
- 21.3.6(d)(4)(iii)(B)** The Tier 4 surface emissions rate report shall be submitted within 1 year of the first measured surface exceedance of 500 parts per million methane, following the procedure specified in subparagraph 21.3.6(j)(2).
- 21.3.6(d)(4)(iv)** If the landfill is in the closed landfill subcategory, the owner or operator shall submit a collection and control system design plan to the Director within 1 year of the first NMOC emission rate report in which the NMOC emission rate equals or exceeds 50 megagrams per year, except as follows:
- 21.3.6(d)(4)(iv)(A)** If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in subparagraph 21.3.3(a)(3), and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated NMOC emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated NMOC emission rate based on NMOC sampling and analysis, shall be submitted, following the procedure specified in subparagraph 21.3.6(j)(2) within 180 days of the first calculated exceedance of 50 megagrams per year.
- 21.3.6(d)(4)(iv)(B)** If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant k , as provided in Tier 3 in subparagraph 21.1.1(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant k shall be used in the NMOC emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of subparagraph 21.1.1(a)(4), and the resulting site-specific methane generation rate constant k shall be submitted, following the procedure specified in subparagraph 21.3.6(j)(2), to the Director within 1 year of the first calculated NMOC emission rate equaling or exceeding 50 megagrams per year.
- 21.3.6(d)(4)(iv)(C)** The landfill owner or operator elects to demonstrate surface emissions are low, consistent with the provisions in subdivision 21.3.6(d)(4)(iii).
- 21.3.6(d)(4)(iv)(D)** The landfill has already submitted a gas collection and control system design plan consistent with the provisions of Subpart WWW of 40 CFR 60 or any other requirements of this Chapter.
- 21.3.6(d)(5)** The landfill owner or operator shall notify the Health Officer that the design plan is completed and submit a copy of the plan's signature page. The Health Officer has 90 days to decide whether the design plan should be submitted for review. If the Health Officer chooses to review the plan, the approval process continues as described in subparagraph 21.3.6(d)(6). However, if the Health Officer indicates that submission is not required or does not respond within 90 days, the landfill owner or operator can continue to implement the

plan with the recognition that the owner or operator is proceeding at their own risk. In the event that the design plan is required to be modified to obtain approval, the owner or operator shall take any steps necessary to conform any prior actions to the approved design plan and any failure to do so could result in an enforcement action.

- 21.3.6(d)(6)** Upon receipt of an initial or revised design plan, the Director shall review the information submitted under subparagraphs 21.3.6(d)(1) through 21.3.6(d)(3), and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems. If the Director does not approve or disapprove the design plan, or does not request that additional information be submitted within 90 days of receipt, then the owner or operator may continue with implementation of the design plan, recognizing they would be proceeding at their own risk.
- 21.3.6(d)(7)** If the owner or operator chooses to demonstrate compliance with the emission control requirements of this Chapter using a treatment system as defined in this Chapter, then the owner or operator shall prepare a site-specific treatment system monitoring plan as specified in subdivision 21.3.7(b)(5)(ii).
- 21.3.6(e)** Revised design plan. The owner or operator who has already been required to submit a design plan under 21.3.6(d), or under Subpart WWW of 40 CFR part 60; or any other requirements of this Chapter shall submit a revised design plan to the Director for approval as follows:
- 21.3.6(e)(1)** At least 90 days before expanding operations to an area not covered by the previously approved design plan.
- 21.3.6(e)(2)** Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was submitted to the Health Officer according to paragraph 21.3.6(d).
- 21.3.6(f)** Closure report. Each owner or operator of a controlled landfill shall submit a closure report to the Health Officer within 30 days of waste acceptance cessation. The Health Officer may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of ADEM Admin. Code Chapter 335-13-4. If a closure report has been submitted to the Health Officer, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR §60.7(a)(4).
- 21.3.6(g)** Equipment removal report. Each owner or operator of a controlled landfill shall submit an equipment removal report to the Health Officer 30 days prior to removal or cessation of operation of the control equipment.
- 21.3.6(g)(1)** The equipment removal report shall contain all of the following items:
- 21.3.6(g)(1)(i)** A copy of the closure report submitted in accordance with Paragraph 21.3.6(f);
- 21.3.6(g)(1)(ii)** A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX, or information that demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and
- 21.3.6(g)(1)(iii)** Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 34 megagrams or greater of NMOC per year unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports; or
- 21.3.6(g)(1)(iv)** For the closed landfill subcategory, dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year, unless the NMOC emission rate reports have been submitted to the EPA via the EPA's CDX. If the NMOC emission rate reports have been previously submitted to the EPA's CDX, a statement that the NMOC emission rate reports have been submitted electronically and the dates that the reports were submitted to the EPA's CDX may be submitted in the equipment removal report in lieu of the NMOC emission rate reports.

- 21.3.6(g)(2)** The Health Officer may request such additional information as may be necessary to verify that all of the conditions for removal in paragraph 21.3.1(e) have been met.
- 21.3.6(h)** Annual report. Each owner or operator of a landfill seeking to comply with paragraph 21.3.1(d) using an active collection system designed in accordance with paragraph 21.3.1(a) shall submit to the Health Officer annual reports of the recorded information in subparagraphs 21.3.6(h)(1) through 21.3.6(h)(6). The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR §60.8, as applicable, unless the report of the results of the performance test has been submitted to the EPA via the EPA's CDX. In the initial annual report, the process unit(s) tested, the pollutant(s) tested and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX. The initial performance test report shall be submitted, following the procedure specified in subparagraph 21.3.6(j)(1) no later than the date that the initial annual report is submitted. For enclosed combustion devices and flares, reportable exceedances are defined under Paragraph 21.3.7(c)(1)(i). If complying with the operational provisions of 40 CFR §§ 63.1958, 63.1960, and 63.1961, as allowed in sections 21.3.2, 21.3.4 and 21.3.5, the owner or operator shall follow the semi-annual reporting requirements in §63.1981(h) in lieu of this paragraph.
- 21.3.6(h)(1)** Value and length of time for exceedance of applicable parameters monitored under Paragraphs 21.3.5(a), 21.3.5(b), 21.3.5(c), 21.3.5(d) and 21.3.5(g).
- 21.3.6(h)(2)** Description and duration of all periods when the gas stream was diverted from the control device or treatment system through a bypass line or the indication of bypass flow as specified under Section 21.3.5.
- 21.3.6(h)(3)** Description and duration of all periods when the control device or treatment system was not operating and length of time the control device or treatment system was not operating.
- 21.3.6(h)(4)** All periods when the collection system was not operating.
- 21.3.6(h)(5)** The location of each exceedance of the 500 parts per million methane concentration as provided in Paragraph 21.3.2(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. For location, the owner or operator shall determine the latitude and longitude coordinates using an instrument with an accuracy of at least 4 meters. The coordinates shall be in decimal degrees with at least five decimal places.
- 21.3.6(h)(6)** The date of installation and the location of each well or collection system expansion added pursuant to paragraphs 21.3.4(a)(3), 21.3.4(a)(5), 21.3.4(b), and 21.3.4(c)(4).
- 21.3.6(h)(7)** For any corrective action analysis for which corrective actions are required in subparagraphs 21.3.4(a)(3) or 21.3.4(a)(5), and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or elevated temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.
- 21.3.6(i)** Initial performance test report. Each owner or operator seeking to comply with 21.3.1(b) shall include the following information with the initial performance test report required under 49 CFR §60.8:
- 21.3.6(i)(1)** A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;
- 21.3.6(i)(2)** The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
- 21.3.6(i)(3)** The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;
- 21.3.6(i)(4)** The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;
- 21.3.6(i)(5)** The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

- 21.3.6(i)(6)** The provisions for the control of off-site migration.
- 21.3.6(j)** Electronic reporting. The owner or operator shall submit reports electronically according to subparagraph 21.3.6(j)(1) and 21.3.6(j)(2).
- 21.3.6(j)(1)** Within 60 days after the date of completing each performance test (as defined in 40 CFR § 60.8), the owner or operator shall submit the results of each performance test according to the following procedures:
- 21.3.6(j)(1)(i)** For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, the owner or operator shall submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Performance test data shall be submitted in a file format generated through the use of the EPA's ERT or an alternative file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site, once the XML schema is available. If the owner or operator claim that some of the performance test information being submitted is confidential business information (CBI), the owner or operator shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.
- 21.3.6(j)(1)(ii)** For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the owner or operator shall submit the results of the performance test to the Director at the appropriate address listed in 40 CFR § 60.4.
- 21.3.6(j)(2)** Each owner or operator required to submit reports following the procedure specified in this paragraph shall submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The owner or operator shall use the appropriate electronic report in CEDRI for this Chapter or an alternate electronic file format consistent with the XML schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>). If the reporting form specific to this Chapter is not available in CEDRI at the time that the report is due, the owner or operator shall submit the report to the Director at the appropriate address listed in §60.4. Once the form has been available in CEDRI for 90 calendar days, the owner or operator shall begin submitting all subsequent reports via CEDRI. The reports shall be submitted by the deadlines specified in this Chapter, regardless of the method in which the reports are submitted.
- 21.3.6(k)** Corrective action and the corresponding timeline. The owner or operator shall submit according to subparagraphs 21.3.6(k)(1) and 21.3.6(k)(2). If complying with the operational provisions of 40 CFR §§ 63.1958, 63.1960, and 63.1961, as allowed in sections 21.3.2, 21.3.4 and 21.3.5, the owner or operator shall follow the corrective action and the corresponding timeline reporting requirements in 40 CFR §63.1981(j) in lieu of subparagraphs 21.3.6(k)(1) and 21.3.6(k)(2).
- 21.3.6(k)(1)** For corrective action that is required according to subdivisions 21.3.4(a)(3)(iii) or 21.3.4(a)(5)(iii), and is expected to take longer than 120 days after the initial exceedance to complete, the owner or operator shall submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Director as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above. The Director shall approve the plan for corrective action and the corresponding timeline.
- 21.3.6(k)(2)** For corrective action that is required according to subdivisions 21.3.4(a)(3)(iii) or 21.3.4(a)(5)(iii), and is not completed within 60 days after the initial exceedance, the owner or operator shall submit a notification to the Director as soon as practicable but no later than 75 days after the first measurement of positive pressure or temperature exceedance.
- 21.3.6(l)** (l) Liquids addition. The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that has employed leachate recirculation or added liquids based on a Research, Development, and Demonstration permit (issued through Resource Conservation and Recovery Act, subtitle D, part 258) within the last 10 years shall submit to the Director, annually, following the procedure specified in subparagraph 21.3.6(j)(2), the following information:

- 21.3.6(l)(1)** Volume of leachate recirculated (gallons per year) and the reported basis of those estimates (records or engineering estimates).
- 21.3.6(l)(2)** Total volume of all other liquids added (gallons per year) and the reported basis of those estimates (records or engineering estimates).
- 21.3.6(l)(3)** Surface area (acres) over which the leachate is recirculated (or otherwise applied).
- 21.3.6(l)(4)** Surface area (acres) over which any other liquids are applied.
- 21.3.6(l)(5)** The total waste disposed (megagrams) in the areas with recirculated leachate and/or added liquids based on on-site records to the extent data are available, or engineering estimates and the reported basis of those estimates.
- 21.3.6(l)(6)** The annual waste acceptance rates (megagrams per year) in the areas with recirculated leachate and/or added liquids, based on on-site records to the extent data are available, or engineering estimates.
- 21.3.6(l)(7)** The initial report shall contain items in subparagraphs 21.3.6(l)(1) through 21.3.6(l)(6) per year for the most recent 365 days as well as for each of the previous 10 years, to the extent historical data are available in on-site records, and the report shall be submitted no later than:
- 21.3.6(l)(7)(i)** September 27, 2017, for landfills that commenced construction, modification, or reconstruction after July 17, 2014 but before August 29, 2016; or
- 21.3.6(l)(7)(ii)** 365 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction after August 29, 2016.
- 21.3.6(l)(8)** Subsequent annual reports shall contain items in subparagraphs 21.3.6(l)(1) through 21.3.6(l)(6) for the 365-day period following the 365-day period included in the previous annual report, and the report shall be submitted no later than 365 days after the date the previous report was submitted.
- 21.3.6(l)(9)** Landfills in the closed landfill subcategory are exempt from reporting requirements contained in subparagraphs 21.3.6(l)(1) through 21.3.6(l)(7).
- 21.3.6(l)(10)** Landfills may cease annual reporting of items in subparagraphs 21.3.6(l)(1) through 21.3.6(l)(6) once they have submitted the closure report in 21.3.6(f).
- 21.3.6(m)** Tier 4 notification.
- 21.3.6(m)(1)** The owner or operator of an affected landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters shall provide a notification of the date(s) upon which it intends to demonstrate site-specific surface methane emissions are below 500 parts per million methane, based on the Tier 4 provisions of subparagraph 21.3.3(a)(6). The landfill shall also include a description of the wind barrier to be used during the SEM in the notification. Notification shall be postmarked not less than 30 days prior to such date.
- 21.3.6(m)(2)** If there is a delay to the scheduled Tier 4 SEM date due to weather conditions, including not meeting the wind requirements in clause 21.3.3(a)(6)(iii)(A), the owner or operator of a landfill shall notify the Health Officer by email or telephone no later than 48 hours before any known delay in the original test date, and arrange an updated date with the Health Officer by mutual agreement.
- 21.3.6(n)** Each owner or operator that chooses to comply with the provisions in 40 CFR §§ 63.1958, 63.1960, and 63.1961, as allowed in sections 21.3.2, 21.3.4 and 21.3.5, the owner or operator shall submit the high temperature report according to §63.1981(k).
- 21.3.7** Recordkeeping Requirements.
- 21.3.7(a)** Except as provided in subdivision 21.3.1(d)(2)(i), each owner or operator of a MSW landfill subject to the provisions of Paragraph 21.3.1(d) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered Paragraph 21.3.1(d), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
- 21.3.7(b)** Except as provided in subdivision 21.3.1(d)(2)(i), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in Subparagraphs

21.3.7(b)(1) through (b)(5) as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

- 21.3.7(b)(1)** Where an owner or operator subject to the provisions of this Chapter seeks to demonstrate compliance with paragraphs 21.3.1(a) and 21.3.1(b):
 - 21.3.7(b)(1)(i)** The maximum expected gas generation flow rate as calculated in Subparagraph 21.3.4(a)(1). The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Health Officer.
 - 21.3.7(b)(1)(ii)** The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in Subparagraph 21.3.8(a)(1).
- 21.3.7(b)(2)** Where an owner or operator subject to the provisions of this Chapter seeks to demonstrate compliance with paragraph 21.3.1(b) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts:
 - 21.3.7(b)(2)(i)** The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test.
 - 21.3.7(b)(2)(ii)** The percent reduction of NMOC determined as specified in paragraph 21.3.1(b) achieved by the control device.
- 21.3.7(b)(3)** Where an owner or operator subject to the provisions of this Chapter seeks to demonstrate compliance with subparagraph 21.3.1(b)(2) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.
- 21.3.7(b)(4)** Where an owner or operator subject to the provisions of this Chapter seeks to demonstrate compliance with subparagraph 21.3.1(b)(1) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.
- 21.3.7(b)(5)** Where an owner or operator subject to the provisions of this Chapter seeks to demonstrate compliance with subparagraph 21.3.1(b)(3) through use of a landfill gas treatment system:
 - 21.3.7(b)(5)(i)** Bypass records. Records of the flow of landfill gas to, and bypass of, the treatment system.
 - 21.3.7(b)(5)(ii)** Site-specific treatment monitoring plan, to include:
 - 21.3.7(b)(5)(ii)(A)** Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas.
 - 21.3.7(b)(5)(ii)(B)** Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas.
 - 21.3.7(b)(5)(ii)(C)** Documentation of the monitoring methods and ranges, along with justification for their use.
 - 21.3.7(b)(5)(ii)(D)** Identify who is responsible (by job title) for data collection.
 - 21.3.7(b)(5)(ii)(E)** Processes and methods used to collect the necessary data.
 - 21.3.7(b)(5)(ii)(F)** Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems.
- 21.3.7(c)** Except as provided in subparagraph 21.3.6(d)(2), each owner or operator of a controlled landfill subject to the provisions of this Chapter shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in Section 21.3.5 as well as up-to-date, readily

accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

- 21.3.7(c)(1)** The following constitute exceedances that shall be recorded and reported under Paragraph 21.3.6(h):
- 21.3.7(c)(1)(i)** For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C below the average combustion temperature during the most recent performance test at which compliance with subparagraph 21.3.1(b)(2) was determined.
 - 21.3.7(c)(1)(ii)** For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under subparagraph 21.3.7(b)(3).
- 21.3.7(c)(2)** Each owner or operator subject to the provisions of this Chapter shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under Section 21.3.5.
- 21.3.7(c)(3)** Each owner or operator subject to the provisions of this Chapter who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with subparagraph 21.3.1(b)(2) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State regulatory requirements.)
- 21.3.7(c)(4)** Each owner or operator seeking to comply with the provisions of this Chapter by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under Paragraph 21.3.5(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
- 21.3.7(d)** Except as provided in subparagraph 21.3.6(d)(2), each owner or operator subject to the provisions of this Chapter shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector that matches the labeling on the plot map.
- 21.3.7(d)(1)** Each owner or operator subject to the provisions of this Chapter shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under Paragraph 21.3.4(b).
 - 21.3.7(d)(2)** Each owner or operator subject to the provisions of this Chapter shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in Subdivision 21.3.8(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in Subdivision 21.3.8(a)(3)(ii).
- 21.3.7(e)** Except as provided in subparagraph 21.3.6(d)(2), each owner or operator subject to the provisions of this Chapter shall keep for at least 5 years up-to-date, readily accessible records of the items in 21.3.7(e)(1) through (5). Each owner or operator that chooses to comply with the provisions in 40 CFR §§ 63.1958, 63.1960, and 63.1961, as allowed in sections 21.3.2, 21.3.4 and 21.3.5 shall keep the records in subparagraph 21.3.7(e)(6) and must keep records according to 40 CFR § 63.1983(e)(1) through (5) in lieu of subparagraphs 21.3.7(e)(1) through (5).
- 21.3.7(e)(1)** All collection and control system exceedances of the operational standards in 21.3.2 the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
 - 21.3.7(e)(2)** Each owner or operator subject to the provisions of this Chapter shall also keep records of each wellhead temperature monitoring value of 55 degrees Celsius (131 degrees Fahrenheit) or above, each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent.
 - 21.3.7(e)(3)** For any root cause analysis for which corrective actions are required in subparagraphs 21.3.4(a)(3) or 21.3.4(a)(5), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed.

- 21.3.7(e)(4)** For any root cause analysis for which corrective actions are required in subdivisions 21.3.4(a)(3)(ii) or 21.3.4(a)(5)(ii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.
- 21.3.7(e)(5)** For any root cause analysis for which corrective actions are required in subdivisions 21.3.4(a)(3)(iii) or 21.3.4(a)(5)(iii), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the regulatory agency.
- 21.3.7(e)(6)** Each owner or operator that chooses to comply with the provisions in 40 CFR §§ 63.1958, 63.1960, and 63.1961, shall keep records of the date upon which the owner or operator started complying with the provisions in §§ 63.1958, 63.1960, and 63.1961.
- 21.3.7(f)** Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of “design capacity”, shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic format are acceptable.
- 21.3.7(g)** Landfill owners or operators seeking to demonstrate that site-specific surface methane emissions are below 500 parts per million by conducting surface emission monitoring under the Tier 4 procedures specified in subparagraph 21.3.3(a)(6) shall keep for at least 5 years up-to-date, readily accessible records of all surface emissions monitoring and information related to monitoring instrument calibrations conducted according to sections 8 and 10 of Method 21 of appendix A of 40 CFR Part 60, including all of the following items:
- 21.3.7(g)(1)** Calibration records:
- 21.3.7(g)(1)(i)** Date of calibration and initials of operator performing the calibration.
- 21.3.7(g)(1)(ii)** Calibration gas cylinder identification, certification date, and certified concentration.
- 21.3.7(g)(1)(iii)** Instrument scale(s) used.
- 21.3.7(g)(1)(iv)** A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value.
- 21.3.7(g)(1)(v)** If an owner or operator makes their own calibration gas, a description of the procedure used.
- 21.3.7(g)(2)** Digital photographs of the instrument setup. The photographs shall be time and date-stamped and taken at the first sampling location prior to sampling and at the last sampling location after sampling at the end of each sampling day, for the duration of the Tier 4 monitoring demonstration.
- 21.3.7(g)(3)** Timestamp of each surface scan reading:
- 21.3.7(g)(3)(i)** Timestamp should be detailed to the nearest second, based on when the sample collection begins.
- 21.3.7(g)(3)(ii)** A log for the length of time each sample was taken using a stopwatch (e.g., the time the probe was held over the area).
- 21.3.7(g)(4)** Location of each surface scan reading. The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 4 meters. Coordinates shall be in decimal degrees with at least five decimal places.
- 21.3.7(g)(5)** Monitored methane concentration (parts per million) of each reading.
- 21.3.7(g)(6)** Background methane concentration (parts per million) after each instrument calibration test.
- 21.3.7(g)(7)** Adjusted methane concentration using most recent calibration (parts per million).
- 21.3.7(g)(8)** For readings taken at each surface penetration, the unique identification location label matching the label specified in paragraph 21.3.7(d).

- 21.3.7(g)(9)** Records of the operating hours of the gas collection system for each destruction device.
- 21.3.7(h)** Except as provided in subparagraph 21.3.6(d)(2), each owner or operator subject to the provisions of this Chapter shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system monitoring data for parameters measured in subparagraphs 21.3.5(a)(1) through (3).
- 21.3.7(i)** Any records required to be maintained by this Chapter that are submitted electronically via the EPA's CDX may be maintained in electronic format.
- 21.3.7(j)** For each owner or operator reporting leachate or other liquids addition under paragraph 21.3.6(l) keep records of any engineering calculations or company records used to estimate the quantities of leachate or liquids added, the surface areas for which the leachate or liquids were applied, and the estimates of annual waste acceptance or total waste in place in the areas where leachate or liquids were applied.

21.3.8 Specifications for Active Collection Systems.

- 21.3.8(a)** Each owner or operator seeking to comply with paragraph 21.3.1(a) shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the Health Officer.
 - 21.3.8(a)(1)** The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, resistance to the refuse decomposition heat, and ability to isolate individual components or sections for repair or troubleshooting without shutting down entire collection system.
 - 21.3.8(a)(2)** The sufficient density of gas collection devices determined in subparagraph 21.3.8(a)(1) shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior.
 - 21.3.8(a)(3)** The placement of gas collection devices determined in subparagraph 21.3.8(a)(1) shall control all gas producing areas, except as provided by Subdivisions 21.3.8(a)(3)(i) and 21.3.8(a)(3)(ii).
 - 21.3.8(a)(3)(i)** Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under Paragraph 21.3.7(d). The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Health Officer upon request.
 - 21.3.8(a)(3)(ii)** Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Health Officer upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill.

21.3.8(a)(3)(ii)(A) Emissions from each section shall be computed using the following equation:

$$Q_i = 2kL_0M_i(e^{-kt_i})(C_{NMOC})(3.6 \times 10^{-9})$$

where,

Q_i = NMOC emission rate from the i^{th} Section, megagrams per year

k = methane generation rate constant, year⁻¹

L_0 = methane generation potential, cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the i^{th} Section, megagrams

t_i = age of the solid waste in the i^{th} Section, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

3.6×10^{-9} = conversion factor

- 21.3.8(a)(3)(ii)(B)** If the owner or operator is proposing to exclude, or cease gas collection and control from, nonproductive physically separated (e.g., separately lined) closed areas that already have gas collection systems, NMOC emissions from each physically separated closed area shall be computed using either equation in 21.3.3(b), or the equation in 21.3.8(a)(3)(ii)(A).
- 21.3.8(a)(3)(iii)** The values for k and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k , L_D and C_{NMOC} provided in Subparagraph 21.3.3(a)(1) or the alternative values from Subparagraph 21.3.3(a)(5) shall be used. The mass of nondegradable solid waste contained within the given Section may be subtracted from the total mass of the Section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in Subdivision 21.3.8(a)(3)(i).
- 21.3.8(b)** Each owner or operator seeking to comply with paragraph 21.3.1(a) shall construct the gas collection devices using the following equipment or procedures:
- 21.3.8(b)(1)** The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration.
- 21.3.8(b)(2)** Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations.
- 21.3.8(b)(3)** Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.
- 21.3.8(c)** Each owner or operator seeking to comply with paragraph 21.3.1(b) shall convey the landfill gas to a control system in compliance with paragraph 21.3.1(b) through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:
- 21.3.8(c)(1)** For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in Subparagraph 21.3.8(c)(2) shall be used.
- 21.3.8(c)(2)** For new collection systems, the maximum flow rate shall be in accordance with Subparagraph 21.3.4(a)(1).

21.4 Compliance Schedules.

Planning, awarding of contracts, installing and starting up of MSW landfill air emission collection and control equipment that is capable of meeting the emission standards under this Chapter shall be accomplished:

- 21.4.1** Within 30 months after the date an NMOC emission rate report shows NMOC emissions equal or exceed 34 megagrams per year. (50 megagrams per year for the closed landfill subcategory); or
- 21.4.2** Within 30 months after the date of the most recent NMOC emission rate report that shows NMOC emissions equal or exceed 34 megagrams per year (50 megagrams per year for the closed landfill subcategory), if Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.

21.5 Petition for Alternative Standards and Compliance Schedules.

- 21.5.1** A MSW landfill owner or operator may request through petition, alternative emission standards or a longer compliance schedule that is/are not specified in this Chapter through the following procedures.

21.5.1(a) Petition Requirements. To enable the Department to rule on the Petition, the following information, where determined applicable by the Department, shall be included in the petition:

21.5.1(a)(1) A clear and complete statement of the precise extent of the relief sought including specific identification of the particular provisions of the regulations from which the petition is sought. The criteria for relief include:

21.5.1(a)(1)(i) Unreasonable cost of control resulting from landfill age, location, or basic design:

21.5.1(a)(1)(ii) Physical impossibility of installing necessary control equipment; or

21.5.1(a)(1)(iii) Other factors specific to the landfill that make application of a less stringent standard or final compliance time significantly more reasonable.

21.5.1(a)(2) An assessment, with supporting factual information, of the impact that the petition will impose on the public health and the environment in the affected area.

21.5.1(a)(3) Any additional information requested by the Department as necessary to evaluate the petition.

21.5.1(a)(4) A concise factual statement of the reasons the petitioner believes that alternative emission limits or a longer compliance schedule will not threaten the public health or unreasonably create environmental pollution.

21.5.2 Extension of Prior or Existing Alternative Emission Standards or Compliance Schedule. A petition to extend a prior or existing petition granted by the Department shall be commenced by filing a new petition with the Department in accordance with the requirements of Section 21.5.1. To the extent that the information required by Section 21.5.1 has been included in the prior petition for which extension is sought, a submission of that information shall not be required provided that the petition shall request the incorporation of the record, opinion and order in the prior proceeding into the new petition.

21.5.3 Department Actions on Petitions. On receipt of a petition, the Department will authorize one of the following actions, as they shall determine:

21.5.3(a) The petition may be dismissed if the Department determines that it is not adequate under Section 21.5.1.

21.5.3(b) The Department may grant the request of the petition, as petitioned or by imposing such conditions as this Division may require in the Major Source Operating Permit, including the establishment of schedules of compliance and monitoring requirements, if EPA consents to the extension of prior or existing alternative emission standards or compliance schedule as submitted to EPA by the Department.

21.5.3(c) The Department may deny the petition. If such a denial is made, the Department shall notify the petitioner in writing, the reasons for denial and outline procedures for appeal.

21.5.4 Termination Procedures.

Any petition granted by the Department may be terminated by the Department whenever the Department finds, after an opportunity for the petitioner to demonstrate compliance and after notice and an opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the petition or that operation under the petition does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.

CHAPTER 22 – CONTROL OF FUELS (REPEALED)

(Adopted July 14, 1999. Revised May 2, 2001. Repealed May 9, 2012.)

APPENDIX A

(Reserved.)

APPENDIX B

(Reserved.)

APPENDIX C

(Recodified February 8, 1989; Recodified October 10, 1990; Revised September 11, 1991; Revised January 10, 1996; Revised March 11, 1998; Revised December 9, 1998; October 13, 1999; June 14, 2000; November 8, 2000; May 8, 2002; March 12, 2003; November 12, 2003; June 15, 2005; May 10, 2006; June 13, 2007; May 14, 2008; November 12, 2008; May 13, 2009; May 12, 2010; September 14, 2011; November 14, 2012; May 8, 2013; May 11, 2016; and August 14, 2024.)

REFERENCE DOCUMENTS - INCORPORATED BY REFERENCE IN CHAPTERS 13 AND 14

(CROSS REFERENCED TO JCBHAPC RULES AND REGULATIONS)

NEW SOURCE PERFORMANCE STANDARDS

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The complete text of all finalized EPA regulations incorporated into these regulations is located in the documents listed below. Amendments, revisions, or clarifications of EPA regulations which have been codified in the CFR, as well as of finalized regulations which have not yet been codified, are not included in this listing and interested parties are advised to consult the Federal Register for such amendments or revisions. The exceptions listed below are identified as nondelegable to state and local agencies.

CROSS REFERENCE LISTING

JCBH Chapter 13	adopts 40 CFR 60	Exceptions (Section Ref.)
13.2.1	Subpart A	§60.8(b)(2), §60.8(b)(3), §60.11(e)(7), §60.11(e)(8), §60.13(g), §60.13(i), §60.13(j)
13.2.2	Subpart D	
13.2.2(a)	Subpart Da	§60.47Da
13.2.2(b)	Subpart Db	§60.44b(f), §60.44b(g), §60.49b(a)(4)
13.2.2(c)	Subpart Dc	§60.48c(a)(4)
13.2.3	Subpart E	
13.2.3(a)	Subpart Ea	none
13.2.3(b)	Subpart Eb	Authorities not delegated are listed at §60.50b(n)
13.2.3(c)	Subpart Ec	Authorities not delegated are listed at §60.50c(i)
13.2.4	Subpart F	Authorities not delegated are listed at §60.66(b)
13.2.5	Subpart G	
13.2.5(a)	Subpart Ga	
13.2.6	Subpart H	
13.2.7	Subpart I	
13.2.8	Subpart J	§60.105(a)(13)(iii), §60.106(i)(12)
13.2.8(a)	Subpart Ja	Authorities not delegated are listed at §60.109a(b)
13.2.9	Subpart K	
13.2.9(a)	Subpart Ka	§60.114a
13.2.9(b)	Subpart Kb	§60.111b(f)(4), §60.114b, §60.116b(e)(3)(iii), §60.116b(e)(3)(iv), §60.116b(f)(2)(iii)
13.2.10	<i>is reserved.</i>	
13.2.11	<i>is reserved.</i>	
13.2.12	Subpart L	
13.2.13	Subpart M	
13.2.14	Subpart N	
13.2.14(a)	Subpart Na	
13.2.15	Subpart O	§60.153(e)
13.2.16	Subpart P	
13.2.17	Subpart Q	
13.2.18	Subpart R	
13.2.19	Subpart S	
13.2.20	Subpart T	
13.2.21	Subpart U	
13.2.22	Subpart V	
13.2.23	Subpart W	
13.2.24	Subpart X	

JCBH Chapter 13	adopts 40 CFR 60	Exceptions (Section Ref.)
13.2.25	Subpart Y	
13.2.26	Subpart Z	
13.2.27	Subpart AA	
13.2.27(a)	Subpart AAa	
13.2.28	Subpart BB	
13.2.28(a)	Subpart BBa	
13.2.29	Subpart CC	
13.2.30	Subpart DD	
13.2.31	Subpart EE	§60.316(d)
13.2.32 <i>is reserved.</i>		
13.2.33	Subpart GG	
13.2.34	Subpart HH	
13.2.35 <i>is reserved.</i>		
13.2.36 <i>is reserved.</i>		
13.2.37	Subpart KK	
13.2.37(a)	Subpart KKa	
13.2.38	Subpart LL	
13.2.39	Subpart MM	
13.2.39(a)	Subpart MMA	
13.2.40	Subpart NN	
13.2.41 <i>is reserved.</i>		
13.2.42	Subpart PP	
13.2.43	Subpart QQ	
13.2.44	Subpart RR	§60.446(c)
13.2.45	Subpart SS	§60.456(d)
13.2.46	Subpart TT	§60.466(d)
13.2.47	Subpart UU	§60.474(g)
13.2.48	Subpart VV	§60.482-1(c)(2), §60.484
13.2.48(a)	Subpart VVa	§60.484a
13.2.49	Subpart WW	§60.496(c)
13.2.50	Subpart XX	§60.502(e)(6)
13.2.51 <i>is reserved.</i>		
13.2.52 <i>is reserved.</i>		
13.2.53 <i>is reserved.</i>		
13.2.54	Subpart BBB	§60.543(c)(2)(ii)(B)
13.2.55 <i>is reserved.</i>		
13.2.56	Subpart DDD	§60.562-2(c)
13.2.57 <i>is reserved.</i>		
13.2.58	Subpart FFF	
13.2.59	Subpart GGG	
13.2.59(a)	Subpart GGGa	
13.2.60	Subpart HHH	
13.2.61	Subpart III	§60.613(e)
13.2.62	Subpart JJJ	
13.2.63	Subpart KKK	
13.2.64	Subpart LLL	
13.2.65 <i>is reserved.</i>		
13.2.66	Subpart NNN	§60.663(e)
13.2.67	Subpart OOO	
13.2.68	Subpart PPP	
13.2.69	Subpart QQQ	
13.2.70	Subpart RRR	§60.703(e)
13.2.71	Subpart SSS	§60.711(a)(16), §60.713(b)(1)(i), §60.713(b)(1)(ii), §60.713(b)(5)(i), §60.713(d), §60.715(a), §60.716
13.2.72	Subpart TTT	§60.723(b)(1), §60.723(b)(2)(i)(C), §60.723(b)(2)(iv), §60.724(b), §60.724(e), §60.724(f), §60.725(b)

JCBH Chapter 13	adopts 40 CFR 60	Exceptions (Section Ref.)
13.2.72(a)	Subpart TTTa	§60.723a(b)(1), §60.723a(b)(2)(i)(C), §60.723a(b)(2)(iv), §60.724a(b), §60.724a(e), §60.724a(f), §60.725a(b)
13.2.73	Subpart UUU	
13.2.74	Subpart VVV	§60.743(a)(3)(v)(A), §60.743(a)(3)(v)(B), §60.743(e), §60.745(a), §60.746
13.2.75	Subpart WWW	§60.754(a)(5)
13.2.76	Subpart XXX	§60.764(a)(5)
13.2.77 <i>is reserved.</i>		
13.2.78 <i>is reserved.</i>		
13.2.79	Subpart AAAA	none
13.2.80 <i>is reserved.</i>		
13.2.81	Subpart CCCC	Authorities not delegated are listed at §60.2030(c)
13.2.82 <i>is reserved.</i>		
13.2.83 <i>is reserved.</i>		
13.2.84 <i>is reserved.</i>		
13.2.85 <i>is reserved.</i>		
13.2.86 <i>is reserved.</i>		
13.2.87	Subpart IIII	
13.2.88	Subpart JJJJ	
13.2.89	Subpart KKKK	
13.2.90	Subpart LLLL	Authorities not delegated are listed at §60.4785(c)
13.2.91	Subpart OOOO	
13.2.91a	Subpart OOOOa	§60.5365a(h)(2), §60.5398a(a), §60.5399a(a)
13.2.91b	Subpart OOOOb	Authorities not delegated are listed at §60.5398a(a)
13.2.91c	Subpart OOOOc	Authorities not delegated are listed at §60.5373c
13.2.92 <i>is reserved.</i>		
13.2.93 <i>is reserved.</i>		
13.2.94 <i>is reserved.</i>		
13.2.95 <i>is reserved.</i>		
13.2.96	Subpart TTTT	Authorities not delegated are listed at §60.5575(b)
13.3.1	Appendix A	
13.3.2	Appendix B	
13.3.3	Appendix F	
13.3.4	Appendix K	
JCBH Chapter 14	adopts 40 CFR 61	Exceptions (Section Ref.)
14.2.1	Subpart A	§61.04(b), §61.12(d)(1), §61.13(h)(1)(ii), §61.13(i), §61.14(d), §61.14(g)
14.2.2	Subpart C	§61.32(b)
14.2.3	Subpart D	
14.2.4	Subpart E	§61.53(c)(4), §61.55(d)
14.2.5	Subpart F	§61.66, §61.67(g)
14.2.6 <i>is reserved.</i>		
14.2.7 <i>is reserved.</i>		
14.2.8 <i>is reserved.</i>		
14.2.9	Subpart J	§61.112(c)
14.2.10 <i>is reserved.</i>		
14.2.11	Subpart L	§61.136(d)
14.2.12	Subpart M	§61.149(c)(2), §61.150(a)(4), §61.151(c), §61.152(b)(3), §61.154(d), §61.155(a)
14.2.13	Subpart N	§61.162(c), §61.163(h), §61.164(a)
14.2.14	Subpart O	§61.174(a)
14.2.15	Subpart P	
14.2.16 <i>is reserved.</i>		
14.2.17 <i>is reserved.</i>		
14.2.18 <i>is reserved.</i>		

JCBH Chapter 14	adopts 40 CFR 61	Exceptions (Section Ref.)
14.2.19 <i>is reserved.</i>		
14.2.20 <i>is reserved.</i>		
14.2.21	Subpart V	§61.242-1(c)(2), §61.244
14.2.22 <i>is reserved.</i>		
14.2.23 <i>is reserved.</i>		
14.2.24	Subpart Y	§61.273
14.2.25 <i>is reserved.</i>		
14.2.26 <i>is reserved.</i>		
14.2.27	Subpart BB	none
14.2.28 <i>is reserved.</i>		
14.2.29 <i>is reserved.</i>		
14.2.30 <i>is reserved.</i>		
14.2.31	Subpart FF	§61.353
14.3.1	Appendix B	
JCBH Chapter 14	adopts 40 CFR 63	Exceptions (Section Ref.)
14.5.1	Subpart A	§63.6(g), §63.6(h)(9), §63.7(e)(2)(ii), §63.7(f), §63.8(f), §63.10(f)
14.5.2	Subpart B	
14.5.3	Subpart D	
14.5.4 <i>is reserved.</i>		
14.5.5	Subpart F	Authorities not delegated are listed at §63.106(c)
14.5.6	Subpart G	Authorities not delegated are listed at §63.153(c)
14.5.7	Subpart H	Authorities not delegated are listed at §63.183(c)
14.5.8	Subpart I	Authorities not delegated are listed at §63.193(c)
14.5.9 <i>is reserved.</i>		
14.5.10 <i>is reserved.</i>		
14.5.11	Subpart L	Authorities not delegated are listed at §63.313(d)
14.5.12	Subpart M	Authorities not delegated are listed at §63.326(c)
14.5.13	Subpart N	Authorities not delegated are listed at §63.348 (c)
14.5.14	Subpart O	Authorities not delegated are listed at §63.368(c)
14.5.15 <i>is reserved.</i>		
14.5.16	Subpart Q	Authorities not delegated are listed at §63.407(c)
14.5.17	Subpart R	Authorities not delegated are listed at §63.429(c)
14.5.18	Subpart S	Authorities not delegated are listed at §63.458(c)
14.5.19	Subpart T	Authorities not delegated are listed at §63.470(c)
14.5.20	Subpart U	Authorities not delegated are listed at §63.507(c)
14.5.21 <i>is reserved.</i>		
14.5.22	Subpart W	Authorities not delegated are listed at §63.529(c)
14.5.23	Subpart X	Authorities not delegated are listed at §63.551(c)
14.5.24	Subpart Y	Authorities not delegated are listed at §63.568(c)
14.5.25 <i>is reserved.</i>		
14.5.26	Subpart AA	Authorities not delegated are listed at §63.611(c)
14.5.27	Subpart BB	Authorities not delegated are listed at §63.632(c)
14.5.28	Subpart CC	Authorities not delegated are listed at §63.656(c)
14.5.29	Subpart DD	Authorities not delegated are listed at §63.698(c)
14.5.30	Subpart EE	Authorities not delegated are listed at §63.708(c)
14.5.31 <i>is reserved.</i>		
14.5.32	Subpart GG	Authorities not delegated are listed at §63.759(c)
14.5.33	Subpart HH	Authorities not delegated are listed at §63.776(c)
14.5.34	Subpart II	Authorities not delegated are listed at §63.789(c)
14.5.35	Subpart JJ	Authorities not delegated are listed at §63.808(c)
14.5.36	Subpart KK	Authorities not delegated are listed at §63.831(c)
14.5.37 <i>is reserved.</i>		
14.5.38	Subpart MM	Authorities not delegated are listed at §63.868(b)
14.5.39	Subpart NN	Authorities not delegated as required by §63.12

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14.5.89 *is reserved.*

adopts 40 CFR 63

Subpart OO
Subpart PP
Subpart QQ
Subpart RR
Subpart SS
Subpart TT
Subpart UU
Subpart VV
Subpart WW
Subpart XX
Subpart YY

Subpart CCC
Subpart DDD
Subpart EEE

Subpart GGG
Subpart HHH
Subpart III
Subpart JJJ

Subpart LLL
Subpart MMM
Subpart NNN
Subpart OOO
Subpart PPP

Subpart RRR

Subpart UUU
Subpart VVV

Subpart XXX

Subpart AAAA

Subpart CCCC
Subpart DDDD
Subpart EEEE
Subpart FFFF

Subpart GGGG

Subpart HHHH
Subpart IIII
Subpart JJJJ
Subpart KKKK

Exceptions (Section Ref.)

Authorities not delegated are listed at §63.908(c)
Authorities not delegated are listed at §63.929(c)
Authorities not delegated are listed at §63.949(c)
Authorities not delegated are listed at §63.967(c)
Authorities not delegated are listed at §63.992(b)
Authorities not delegated are listed at §63.1000(b)(1)
Authorities not delegated are listed at §63.1019(f)(1)
Authorities not delegated are listed at §63.1050(c)
Authorities not delegated are listed at §63.1067(b)
Authorities not delegated are listed at §63.1097(b)
Authorities not delegated are listed at §63.1114(b)

Authorities not delegated are listed at §63.1166(c)
Authorities not delegated are listed at §63.1195(c)
Authorities not delegated are listed at §63.1214(c)

Authorities not delegated are listed at §63.1261(c)
Authorities not delegated are listed at §63.1286(c)
Authorities not delegated are listed at §63.1309(c)
Authorities not delegated are listed at §63.1336(c) and Table 1 of Subpart JJJ

Authorities not delegated are listed at §63.1358(c)
Authorities not delegated are listed at §63.1369(c)
Authorities not delegated are listed at §63.1388(c)
Authorities not delegated are listed at §63.1419(c)
Authorities not delegated are listed at §63.1421(c) and Table 1 of Subpart PPP
Authorities not delegated are listed at §63.1458(c)
Authorities not delegated are listed at §63.1519(c) and Appendix A to Subpart RRR

None
Authorities not delegated are listed at §63.1578(c)
Authorities not delegated are listed at §63.1594(c)

Authorities not delegated are listed at §63.1629(c) and §63.1661(c)

Authorities not delegated are listed at §63.1985(c)

Authorities not delegated are listed at §63.2191(c)
Authorities not delegated are listed at §63.2291(c)
Authorities not delegated are listed at §63.2402(b)
Authorities not delegated are listed at §63.2545(b) and Table 12 of Subpart FFFF
Authorities not delegated are listed at §63.2871(c) and Table 1 of Subpart GGGG
Authorities not delegated are listed at §63.3002(b)
Authorities not delegated are listed at §63.3175(c)
Authorities not delegated are listed at §63.3420(b)
Authorities not delegated are listed at §63.3560(c)

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14.5.97 *is reserved.*
14.5.98 *is reserved.*
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14.5.138 *is reserved.*
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14.5.140 *is reserved.*
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14.5.143 *is reserved.*
14.5.144

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Subpart MMMM
Subpart NNNN
Subpart OOOO
Subpart PPPP
Subpart QQQQ
Subpart RRRR
Subpart SSSS

Subpart VVVV
Subpart WWWW
Subpart XXXX
Subpart YYYY
Subpart ZZZZ
Subpart AAAAA
Subpart BBBB
Subpart CCCC
Subpart DDDD
Subpart EEEE
Subpart FFFF
Subpart GGGG
Subpart HHHH
Subpart IIII
Subpart JJJJ
Subpart KKKK
Subpart LLLL

Subpart NNNNN

Subpart P PPPP
Subpart QQQQQ
Subpart RRRRR

Subpart TTTTT
Subpart UUUUU

Subpart YYYYY
Subpart ZZZZ

Subpart BBBBBB
Subpart CCCCCC
Subpart DDDDDD
Subpart EEEEE
Subpart FFFFFF
Subpart GGGGGG
Subpart HHHHHH

Subpart JJJJJ

Subpart LLLLLL
Subpart MMMMMM

Subpart OOOOOO

Exceptions (Section Ref.)

Authorities not delegated are listed at §63.3980(c)
Authorities not delegated are listed at §63.4180(c)
Authorities not delegated are listed at §63.4370(c)
Authorities not delegated are listed at §63.4580(c)
Authorities not delegated are listed at §63.4780(c)
Authorities not delegated are listed at §63.4980(c)
Authorities not delegated are listed at §63.5200(c)

Authorities not delegated are listed at §63.5776(b)
Authorities not delegated are listed at §63.5930(c)
Authorities not delegated are listed at §63.6014(c)
Authorities not delegated are listed at §63.6170(c)
Authorities not delegated are listed at §63.6670(c)
Authorities not delegated are listed at §63.7141(c)
Authorities not delegated are listed at §63.7194(c)
Authorities not delegated are listed at §63.7351(c)
Authorities not delegated are listed at §63.7570(b)
Authorities not delegated are listed at §63.7761(c)
Authorities not delegated are listed at §63.7851(c)
Authorities not delegated are listed at §63.7956(c)
Authorities not delegated are listed at §63.8100(b)
Authorities not delegated are listed at §63.8264(c)
Authorities not delegated are listed at §63.8510(c)
Authorities not delegated are listed at §63.8660(c)
Authorities not delegated are listed at §63.8697(b)

Authorities not delegated are listed at §63.9070(c)

Authorities not delegated are listed at §63.9370(c)
Authorities not delegated are listed at §63.9560(c)
Authorities not delegated are listed at §63.9651(c)

Authorities not delegated are listed at §63.9941(c)
Authorities not delegated are listed at §63.10041(b)

Authorities not delegated are listed at §63.10691(c)
Authorities not delegated are listed at §63.10905(c)

Authorities not delegated are listed at §63.11099(c)
Authorities not delegated are listed at §63.11131(c)
Authorities not delegated are listed at §63.11145(b)
Authorities not delegated are listed at §63.11152(c)
Authorities not delegated are listed at §63.11159(c)
Authorities not delegated are listed at §63.11168(c)&(d)
Authorities not delegated are listed at §63.11179(c)

Authorities not delegated are listed at §63.11236(c)

Authorities not delegated are listed at §63.11399(b)
Authorities not delegated are listed at §63.11406(b)

Authorities not delegated are listed at §63.11420(b)

JCBH Chapter 14

14.5.145
14.5.146
14.5.147 *is reserved.*
14.5.148 *is reserved.*
14.5.149
14.5.150 *is reserved.*
14.5.151
14.5.152
14.5.153
14.5.154
14.5.155
14.5.156
14.5.157 *is reserved.*
14.5.158
14.5.159
14.5.160 *is reserved.*
14.5.161 *is reserved.*
14.5.162 *is reserved.*
14.5.163
14.6.1
14.6.2
14.6.3
14.6.4
14.6.5

adopts 40 CFR 63

Subpart PPPPPP
Subpart QQQQQQ

Subpart TTTTTT

Subpart VVVVVV
Subpart WWWWWW
Subpart XXXXXX
Subpart YYYYYY
Subpart ZZZZZZ
Subpart AAAAAA

Subpart CCCCCC
Subpart DDDDDDD

Subpart HHHHHHH
Appendix A
Appendix B
Appendix C
Appendix D
Appendix E

Exceptions (Section Ref.)

Authorities not delegated are listed at §63.11427(b)
Authorities not delegated are listed at §63.11434(b)

Authorities not delegated are listed at §63.11473(c)

Authorities not delegated are listed at §63.11503(b)
Authorities not delegated are listed at §63.11512(c)
Authorities not delegated are listed at §63.11521(c)
Authorities not delegated are listed at §63.11531(c)
Authorities not delegated are listed at §63.11557(c)
Authorities not delegated are listed at §63.11567(b)

Authorities not delegated are listed at §63.11606(b)
Authorities not delegated are listed at §63.11626(c)

Authorities not delegated are listed at §63.12000(b)
Sect. 2, Method 303

JCBH Chapter 14A

14A.2.1
14A.2.2 *is reserved.*
14A.2.3
14A.2.4
14A.2.5
14A.2.6
14A.2.7

adopts 40 CFR 65

Subpart A

Subpart C
Subpart D
Subpart E
Subpart F
Subpart G

Exceptions (Section Ref.)

§65.8, §65.46, §65.102, §65.156(b)(1)(ii), §65.158(a)(2)(ii)

APPENDIX D

(Adopted December 8, 1993; Revised March 11, 1998¹; October 13, 1999²; May 8, 2002; May 10, 2006; June 13, 2007³; and August 14, 2024⁴)

List of Hazardous Air Pollutants

CAS Number	Chemical Name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic acid
107131	Acrylonitrile
107051	Allyl chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	o-Anisidine
1332214	Asbestos
71432	Benzene (including benzene from gasoline)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl chloride
92524	Biphenyl
117817	Bis(2-ethylhexyl)phthalate (DEHP)
542881	Bis(chloromethyl)ether
75252	Bromoform
106945	1-Bromopropane (1-BP, n-propyl bromide)
106990	1,3-Butadiene
156627	Calcium cyanamide
133062	Captan
63252	Carbaryl
75150	Carbon disulfide
56235	Carbon tetrachloride
463581	Carbonyl sulfide
120809	Catechol
133904	Chloramben
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl methyl ether
126998	Chloroprene
1319773	Cresols/Cresylic acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol

¹ EPA removal of caprolactam, 61 FR 30816 (June 18, 1996). Adopted by JCDH March 11, 1998.

² Formatting only.

³ EPA removal of MEK, 70 FR 75047 (December 19, 2005).

⁴ EPA addition of 1-bromopropane, 87 FR 396, (January 5, 2022). Adopted by JCDH TBD, 2024.

CAS Number	Chemical Name
98828	Cumene
94757	2,4-D, salts and esters
3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
64675	Diethyl sulfate
119904	3,3-Dimethoxybenzidine
60117	Dimethyl aminoazobenzene
119937	3,3-Dimethyl benzidine
79447	Dimethyl carbamoyl chloride
68122	Dimethyl formamide
57147	1,1-Dimethyl hydrazine
131113	Dimethyl phthalate
77781	Dimethyl sulfite
534521	4,6-Dinitro-o-cresol, and salts
51285	2,4-Dinitrophenol
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4-Diethyleneoxide)
122667	1,2-Diphenylhydrazine
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl acrylate
100414	Ethyl benzene
51796	Ethyl carbamate (Urethane)
75003	Ethyl chloride (Chloroethane)
106934	Ethylene dibromide (Dibromoethane)
107062	Ethylene dichloride (1,2-Dichloroethane)
107211	Ethylene glycol
151564	Ethylene imine (Aziridine)
75218	Ethylene oxide
96457	Ethylene thiourea
75343	Ethylidene dichloride (1,1-Dichloroethane)
50000	Formaldehyde
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene
77474	Hexachlorocyclopentadiene
67721	Hexachloroethane
822060	Hexamethylene-1,6-diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric acid
7664393	Hydrogen fluoride (Hydrofluoric acid)
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic anhydride

CAS Number	Chemical Name
67561	Methanol
72435	Methoxychlor
74839	Methyl bromide (Bromomethane)
74873	Methyl chloride (Chloromethane)
71556	Methyl chloroform (1,1,1-Trichloroethane)
60344	Methyl hydrazine
74884	Methyl iodide (Iodomethane)
108101	Methyl isobutyl ketone (Hexone)
624839	Methyl isocyanate
80626	Methyl methacrylate
1634044	Methyl tert butyl ether
101144	4,4-Methylene bis(2-chloroaniline)
75092	Methylene chloride (Dichloromethane)
101688	Methylene diphenyl diisocyanate (MDI)
101779	4,4-Methylenedianiline
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (Aroclors)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene dichloride (1,2-Dichloropropane)
75569	Propylene oxide
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol

CAS Number	Chemical Name
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixture)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes
	Antimony Compounds
	Arsenic Compounds (inorganic including arsine)
	Beryllium Compounds
	Cadmium Compounds
	Chromium Compounds
	Cobalt Compounds
	Coke Oven Emissions
	Cyanide Compounds ¹
	Glycol ethers ²
	Lead Compounds
	Manganese Compounds
	Mercury Compounds
	Fine mineral fibers ³
	Nickel Compounds
	Polycyclic Organic Matter ⁴
	Radionuclides (including radon) ⁵
	Selenium Compounds

NOTES: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

1. X'CN where X = H' or any other group where a formal dissociation may occur. For example KCN or Ca(CN)₂
2. ⁵Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where:
 - n = 1, 2, or 3
 - R = alkyl C7 or less; or
 - R = phenyl or alkyl substituted phenyl;
 - R' = H or alkyl C7 or less; or
 - OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

The substance ethylene glycol monobutyl ether (EGBE, 2- Butoxyethanol) (CAS Number 111-76-2) is deleted from the list of hazardous air pollutants.⁶

3. Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
4. Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.
5. A type of atom which spontaneously undergoes radioactive decay.

⁵ EPA removed surfactant alcohol ethoxylates and their derivatives, 65 FR 47342 (August 2, 2000). JCDH adopted May 8, 2002.

⁶ 69 FR 69320 (November 29, 2004), JCDH adopted May 10, 2006.

APPENDIX E

(Adopted July 14, 1999)

EXEMPTION CLAIM FORM FOR COFIRED COMBUSTORS

Chapter 2 FACILITY INFORMATION

Facility Name: _____

Facility Address: _____

Contact Person Name: _____

Phone: _____

Fax: _____

Type of Facility: _____

WASTE INFORMATION

Please provide the distribution of the types of waste combusted in the incinerator each quarter (i.e. every 3 months):

% Hospital Waste and medical/infectious waste (excluding waste marked with a * below)

% Pathological waste, low level radioactive waste and chemotherapeutic waste *

% Other waste/fuel¹

Does the incinerator accept waste from off-site? Yes No

Lb/Hr How many pounds of waste/fuel¹ are typically charged per hour?

Hr/Day How many hours per day is the waste/fuel¹ charged into the incinerator?

Lb/Qtr How many pounds of waste/fuel¹ are typically charged per quarter?

Please attach an explanation of the methodology that will be used on an ongoing basis to estimate the percentages of waste types discussed above.

CERTIFICATION

I am authorized to make this submission on behalf of the owners and operators of _____ and I hereby certify under penalty of law that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including possible fines and imprisonment. In addition, it is my understanding that I am not subject to a Major Source Operating Permit under Chapter 18 based solely on the requirements Part 5.4 of the Jefferson County Board of Health Air Pollution Control Rules and Regulations.

(Signature of Facilities Manager)

¹ Excluding fuels such as propane or natural gas used to maintain combustion chamber temperatures

EXEMPTION CLAIM FORM FOR INCINERATORS BURNING ONLY PATHOLOGICAL, LOW LEVEL RADIOACTIVE, AND CHEMOTHERAPEUTIC WASTE

Chapter 3 FACILITY INFORMATION

Facility Name: _____

Facility Address: _____

Contact Person Name: _____

Phone: _____

Fax: _____

Type of Facility: _____

WASTE INFORMATION

For periods when only pathological, low-level and/or chemotherapeutic waste(s) are combusted, provide the distribution of the types of waste combusted in the incinerator each quarter (i.e. every 3 months):

_____ % Pathological waste

_____ % Low level radioactive waste

_____ % Chemotherapeutic waste

Does the incinerator accept waste from off-site? Yes No

_____ % Percentage of time when only pathological, low-level and/or chemotherapeutic waste(s) are combusted

_____ Lb/Hr During periods when only pathological, low-level and/or chemotherapeutic waste is combusted, how much do you typically charge per hour?

_____ Hr/Day During periods when only pathological, low-level and/or chemotherapeutic waste is combusted, how many hours per day do you typically charge

_____ Lb/Qtr During periods when only pathological, low-level and/or chemotherapeutic waste is combusted, how many pounds are burned on a quarterly basis?

Please attach an explanation of the methodology that will be used on an ongoing basis to determine the time periods when only pathological, low-level and/or chemotherapeutic waste are burned.

CERTIFICATION

I am authorized to make this submission on behalf of the owners and operators of _____ and I hereby certify under penalty of law that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including possible fines and imprisonment. In addition, it is my understanding that I am not subject to a Major Source Operating Permit under Chapter 18 based solely on the requirements Part 5.4 of the Jefferson County Board of Health Air Pollution Control Rules and Regulations.

(Signature of Facilities Manager)

APPENDIX F

(Adopted May 8, 2002; Revised September 14, 2011)

POLICY FOR BANKING OF EMISSION REDUCTION CREDITS

1. Applicability

This Policy provides for the creation, banking, transfer, and use of nitrogen oxides (NO_x), volatile organic compounds (VOC) and fine particulate matter (PM_{2.5}) emission reduction credits in Jefferson County, Alabama. Sources located within Jefferson County that have the potential to emit NO_x, VOC or PM_{2.5} in amounts greater than 10 tons per year are eligible to create and bank NO_x, VOC or PM_{2.5} emission reduction credits upon application to the Jefferson County Department of Health (the Department) This policy shall in no way supersede or circumvent the requirements and procedures under Sections 2.5.7 and 2.5.9 of the Jefferson County Board of Health Air Pollution Control Rules and Regulations. Definitions under the air regulations are incorporated herein.

2. Eligibility of Emission Reductions

- a. In order to be approved by the Department as an Emission Reduction Credit, a reduction in emissions must be real, permanent, quantifiable, enforceable, surplus, and shall have occurred after December 31, 1996.
- b. To be eligible for consideration as Emission Reduction Credits, emission reductions may be created by any of the following methods:
 - (1) Installation of control equipment not required by any Rule or Regulation;
 - (2) A change in process inputs, formulations, products or product mix, or raw materials;
 - (3) A reduction in actual emission rate;
 - (4) A reduction in operating hours;
 - (5) Production curtailment;
 - (6) Shutdown of emitting sources or facilities; or
 - (7) Any other enforceable method as determined by the Department.

3. Quantification of Emission Reduction Credits

For purposes of calculating the amount of emission reduction that can be quantified as an Emission Reduction Credit, the following procedures must be followed:

- a. Excluding emissions during malfunctions, the source must calculate its average actual annual emissions prior to the emission reduction. Actual emissions prior to the reduction shall be calculated in tons per year (no fractions thereof). In calculating average actual annual emissions prior to the emission reduction, the source shall use data from the 24-month period immediately preceding the reduction in emissions. In its sole discretion, the Department may allow the use of a different time period upon a determination that such period is more representative of normal source operation.
- b. The Emission Reduction Credits generated by the emission reduction shall be calculated by subtracting the allowable annual emissions rate following the reduction from the average annual actual emissions prior to the reduction. (Emission Rate Avg. Actual–Emission Rate Allowable New).
- c. Emission Reduction Credits cannot be banked beyond the allowable emissions of a source or existing emissions of a source, not including any emissions that occur during malfunctions, whichever is less.

4. Discounting of Emission Reduction Credits

Except as provided below, the Department shall not discount or otherwise reduce the amount of Emission Reduction Credits banked under this section.

- a. Emission Reduction Credits banked under this section will expire within a time period not to exceed 60 months from the date the actual emission reduction occurred.
- b. Discounting for more stringent regulations:

If any local, state or federal statute, rule, or regulation decreases an allowable emission rate or otherwise requires a reduction in NO_x, VOC and PM_{2.5} from a particular source category or categories, any banked NO_x, VOC and PM_{2.5} Emission Reduction Credits created by that source category or categories shall be reduced to reflect the new more stringent allowable emission limit or required emission reduction. This policy disallows reductions that are granted as Early Reduction Credits under the NO_x SIP Call.

- c. Shutdown, Disabled or Inoperable Sources:

If a source has been shutdown, disabled or inoperable for more than 60 months prior to applying for Emission Reduction Credits and cannot be restarted without a modification, reconstruction or replacement, no Emission Reduction Credits will be approved. Emission Reduction Credits must be "real."

5. Creation and Banking of Emission Reduction Credits
 - a. Sources seeking to create and bank Emission Reduction Credits must submit an application to the Department, signed by the applicant on forms supplied by the Department. The application shall include, at a minimum, the following information:
 - (1) The company name, contact person and phone number, and street address of the source seeking the Emission Reduction Credits;
 - (2) A description of the type of source, including SCC codes, where the proposed emission reduction shall occur;
 - (3) A detailed description of the method or methods to be employed by the source to create the emission reduction;
 - (4) The date the emission reduction occurred or is to occur;
 - (5) Quantification of the Emission Reduction Credits, as required under Section 3 of this Policy;
 - (6) The proposed method for ensuring the reductions are permanent and enforceable, including any necessary application to amend the source's operating permit or, in the case of a shutdown of process equipment or an entire source, request for permit revocation;
 - (7) Whether any portion of the reduction in emissions to be used to create the Emission Reduction Credits has previously been used to avoid New Source Review through a netting demonstration; and
 - (8) Any other information that may be required to demonstrate that the reduction in emissions is real, permanent, quantifiable, enforceable, and surplus, as defined in Section 2 of this Policy.
 - b. The Department will determine whether the application is complete and will notify the source seeking the Emission Reduction Credit of its determination. A Certificate of Emission Reduction Credits will be issued to the source upon a determination by the Department that the emission reduction meets requirements of this section. Upon issuance of the Certificate, the Department will simultaneously take any action required to ensure the reduction is permanent and enforceable, including issuance of a revised permit or revocation of a permit.
 - c. Certificates of Emission Reduction Credits shall be issued by the Health Officer and shall contain the following information:
 - (1) The amount of the credits, in tons per year;
 - (2) The pollutant reduced, NO_x, VOC and PM_{2.5};
 - (3) The date the reduction occurred;
 - (4) The street address, city, zip code, and UTM coordinates of the source where the reduction occurred;
 - (5) The date of issuance of the Certificate; and
 - (6) The date of expiration of the Certificate.
 - d. The Department shall maintain an Emission Reduction Credits registry that constitutes the official record of all Certificates of Emission Reduction Credits issued and all withdrawals made. The registry shall be available for public review. For each certificate issued, the registry will indicate the amount of the Emission Reduction Credits, the pollutant reduced, the location of the facility generating the Emission Reduction Credits, and the facility contact person.
6. Use of Emission Reduction Credits
 - a. Emission Reduction Credits may be used in any manner authorized under this Section 6 and Section 2.5.7 of the Regulations, including the following:
 - (1) As offsets required for a major new source of NO_x, VOC or PM_{2.5} in a federally designated ozone nonattainment area.
 - (2) As offsets required for a major modification to an existing major source of NO_x, VOC or PM_{2.5} in a federally designated ozone nonattainment area.
 - (3) As part of a netting demonstration under the following conditions:
 - (a) The source using the Emission Reduction Credits is within the same facility that created and banked the Emission Reduction Credits; and
 - (b) The emission reduction represented by the Emission Reduction Credits occurred within the five-year period before construction commences on the modification.
 - (4) As internal offsets provided that the source using the Emission Reduction Credits is the same source that created and banked the Emission Reduction Credits.
 - b. A person having ownership of Emission Reduction Credits has the exclusive right to withdraw the Emission Reduction Credits and may dispose of them or transfer them in any manner not inconsistent with this section.
 - c. Emission Reduction Credits may be withdrawn only by the owner of record and may be withdrawn in whole or in part. In the case of a partial withdrawal, the Department shall issue a revised Certificate of Emission Reduction Credits to the owner of record reflecting the new amount of the credit and shall revoke the original Certificate.
 - d. Emission Reduction Credits can only be used to offset emissions of the same pollutant that was reduced by the source that created and banked the Emission Reduction Credits.

- e. Emission reduction credits used as offsets as required by Section 2.5.7 of the air regulations within a federally designated ozone nonattainment areas shall have been created within that federally designated ozone nonattainment area.

7. Transfer of Certificates of Emission Reduction Credits

- a. If the owner of a Certificate of Emission Reduction Credits transfers the Certificate to a new owner, the Department shall issue a Certificate of Emission Reduction Credits to the new owner and shall revoke the certificate held by the current owner of record.
- b. If the owner of a Certificate of Emission Reduction Credits transfers part of the Emission Reduction Credits represented by the Certificate to a new owner, the Department shall issue a Certificate of Emission Reduction Credits to the new owner reflecting the transferred amount and shall issue a Certificate of Emission Reduction Credits to the current owner of record reflecting the amount of Emission Reduction Credit remaining after the transfer. The original Certificate of Emission Reduction Credits shall be revoked.

8. Administrative Fees

Fees shall be charged to any source seeking to create, certify, bank, use or transfer Emission Reduction Credits according to the latest fee schedule adopted by the Jefferson County Board of Health.


9. Definitions

For the purposes of this policy, the following definitions shall apply:

- a. "Emission Reduction Credits" shall mean quantified and verified VOC, NO_x and PM_{2.5} emission reductions that the Department has approved to be banked for the purpose of netting out or offsetting VOC, NO_x or PM_{2.5} emissions increases of a regulated major new source or a major modification to an existing source.
- b. "Enforceable" means enforceable by the Department. Methods for ensuring that Emission Reduction Credits are enforceable shall include, but not be limited to, conditions in air quality construction or operating permits issued by the Department.
- c. "Netting Demonstration" means the act of calculating a net emissions increase under the preconstruction review requirements of Title I, Part D of the Federal Act and the regulations promulgated thereunder.
- d. "Permanent" means assured for the life of the corresponding Emission Reduction Credit through an enforceable mechanism such as a permit condition or revocation.
- e. "Quantifiable" means that the amount, rate, and characteristics of the Emission Reduction Credits can be estimated through a reliable method approved by the Department.
- f. "Real" means a reduction in actual emissions emitted into the air.
- g. "Surplus" means not required by any local, state, or federal law, regulation, order, or requirement and in excess of reductions used by the Department in issuing any other permit or to demonstrate attainment of federal ambient air quality standards or reasonable further progress towards achieving attainment of federal ambient air quality standards. For the purpose of determining the amount of surplus emission reductions, any seasonal emission limitation or standard shall be assumed to apply throughout the year. Emission reductions that have previously been used to avoid New Source Review through a netting demonstration are not considered surplus.

10. Application Forms

The following three pages are the Department's application forms to apply for banking of Emission Reduction Credits:

	JEFFERSON COUNTY DEPARTMENT OF HEALTH												
	ENVIRONMENTAL HEALTH SERVICES												
	AIR & RADIATION PROTECTION DIVISION												
		-											
Do not write in this space													
APPLICATION TO BANK EMISSION REDUCTION CREDITS													
<i>APPLICANT INFORMATION</i>													
1.	Name of Firm or Institution:												
2.	Responsible Company Official:										Title:		
3.	Mailing Address:												
	City, State, ZIP Code:										Telephone No.:		
4.	Signature of Responsible Company Official:												
<i>SOURCE OF BANKED EMISSION CREDITS INFORMATION</i>													
5.	Source of Banked Emissions:												
6.	Description of Process Generating Banked Emission Credits:												
7.	Source Classification Codes (SCC):												
8.	Source Location:												
	UTM Coordinates:												
9.	Current Operating Permit No.:										Date Issued:		
10.	Explain Method(s) How the Banked Emission Credits Will Be Created:												
11.	Describe Proposed Method(s) for Ensuring the Emission Reductions Are Permanent and Enforceable:												
12.	Date the Emission Reduction Occurred or Is To Occur												
<i>NAME OF PERSON SUBMITTING APPLICATION INFORMATION</i>													
13.	Name of Person Submitting Application:										Title:		
14.	Address:												
	City, State, ZIP Code:										Telephone No.:		
15.	Signature:										Date:		

QUANTIFICATION OF BANKED EMISSION CREDITS INFORMATION								
16.	Quantification of Banked Emission Reduction Credits:							
This Section for Regulation of Permit Allowable Emissions								
Present or Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							
1 Year from the Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							
2 Years from the Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							
This Section for Actual Emissions								
Present or Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							
1 Year from the Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							
2 Years from the Last Year of Operation								
	Regulation or Permit Allowable Emissions	VOC	NO _x	PM _{2.5}	CO	Percent of Rated Capacity (%)	Operating Hours per Year	Calendar Year
	pounds/hour							
	tons/year							

17.	Describe and Show Actual Method(s) of How Emission Reduction Credits Were Determined:
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Calculations:

APPENDIX G

(Adopted November 10, 2010, Revised May 11, 2016)

Greenhouse Gas Global Warming Potentials

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Chemical-Specific GWPs			
Carbon dioxide	124-38-9	CO ₂	1
Methane	74-82-8	CH ₄	25
Nitrous oxide	10024-97-2	N ₂ O	298
Fully Fluorinated GHGs			
Sulfur hexafluoride	2551-62-4	SF ₆	22,800
Trifluoromethyl sulphur pentafluoride	373-80-8	SF ₅ CF ₃	17,700
Nitrogen trifluoride	7783-54-2	NF ₃	17,200
PFC-14 (Perfluoromethane)	75-73-0	CF ₄	7,390
PFC-116 (Perfluoroethane)	76-16-4	C ₂ F ₆	12,200
PFC-218 (Perfluoropropane)	76-19-7	C ₃ F ₈	8,830
Perfluorocyclopropane	931-91-9	C-C ₃ F ₆	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C ₄ F ₁₀	8,860
PFC-318 (Perfluorocyclobutane)	115-25-3	C-C ₄ F ₈	10,300
PFC-4-1-12 (Perfluoropentane)	678-26-2	C ₅ F ₁₂	9,160
PFC-5-1-14 (Perfluorohexane, FC-72)	355-42-0	C ₆ F ₁₄	9,300
PFC-6-1-12	335-57-9	C ₇ F ₁₆ ; CF ₃ (CF ₂) ₅ CF ₃	7,820
PFC-7-1-18	307-34-6	C ₈ F ₁₈ ; CF ₃ (CF ₂) ₆ CF ₃	7,620
PFC-9-1-18	306-94-5	C ₁₀ F ₁₈	7,500
PFPMIE (HT-70)	NA	CF ₃ OCF(CF ₃)CF ₂ OCF ₂ OCF ₃	10,300
Perfluorodecalin (cis)	60433-11-6	Z-C ₁₀ F ₁₈	7,236
Perfluorodecalin (trans)	60433-12-7	E-C ₁₀ F ₁₈	6,288
Saturated Hydrofluorocarbons (HFCs) with 2 or Fewer Carbon-Hydrogen Bonds			
HFC-23	75-46-7	CHF ₃	14,800
HFC-32	75-10-5	CH ₂ F ₂	675
HFC-125	354-33-6	C ₂ HF ₅	3,500
HFC-134	359-35-3	C ₂ H ₂ F ₄	1,100
HFC-134a	811-97-2	CH ₂ FCF ₃	1,430
HFC-227ca	2252-84-8	CF ₃ CF ₂ CHF ₂	2,640
HFC-227ea	431-89-0	C ₃ HF ₇	3,220
HFC-236cb	677-56-5	CH ₂ FCF ₂ CF ₃	1,340
HFC-236ea	431-63-0	CHF ₂ CHF ₂ CF ₃	1,370
HFC-236fa	690-39-1	C ₃ H ₂ F ₆	9,810
HFC-329p	375-17-7	CHF ₂ CF ₂ CF ₂ CF ₃	2,360
HFC-43-10mee	138495-42-8	CF ₃ CFHCFHCF ₂ CF ₃	1,640
Saturated Hydrofluorocarbons (HFCs) with 3 or More Carbon-Hydrocarbon Bonds			
HFC-41	593-53-3	CH ₃ F	92
HFC-143	430-66-0	C ₂ H ₃ F ₃	353
HFC-143a	420-46-2	C ₂ H ₃ F ₃	4,470

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFC-152	624-72-6	CH ₂ FCH ₂ F	53
HFC-152a	75-37-6	CH ₃ CHF ₂	124
HFC-161	353-36-6	CH ₃ CH ₂ F	12
HFC-245ca	679-86-7	C ₃ H ₃ F ₅	693
HFC-245cb	1814-88-6	CF ₃ CF ₂ CH ₃	4,620
HFC-245ea	24270-66-4	CHF ₂ CHFCHF ₂	235
HFC-245eb	431-31-2	CH ₂ FCHF ₂ CF ₃	290
HFC-245fa	460-73-1	CHF ₂ CH ₂ CF ₃	1,030
HFC-263fb	421-07-8	CH ₃ CH ₂ CF ₃	76
HFC-272ca	420-45-1	CH ₃ CF ₂ CH ₃	144
HFC-365mfc	406-58-6	CH ₃ CF ₂ CH ₂ CF ₃	794
Saturated Hydrofluoroethers (HFEs) and Hydrochlorofluoroethers (HCFEs) with 1 Carbon-Hydrogen Bond			
HFE-125	3822-68-2	CHF ₂ OCF ₃	14,900
HFE-227ea	2356-62-9	CF ₃ CHFOCF ₃	1,540
HFE-329mcc2	134769-21-4	CF ₃ CF ₂ OCF ₂ CHF ₂	919
HFE-329me3	428454-68-6	CF ₃ CFHCF ₂ OCF ₃	4,550
1,1,1,2,2,3,3-Heptafluoro-3-(1,2,2,2-tetrafluoroethoxy)-propane	3330-15-2	CF ₃ CF ₂ CF ₂ OCHF ₂ CF ₃	6,490
Saturated HFEs and HCFEs with 2 Carbon-Hydrogen Bonds			
HFE-134 (HG-00)	1691-17-4	CHF ₂ OCHF ₂	6,320
HFE-236ca	32778-11-3	CHF ₂ OCF ₂ CHF ₂	4,240
HFE-236ca12 (HG-10)	78522-47-1	CHF ₂ OCF ₂ OCHF ₂	2,800
HFE-236ea2 (Desflurane)	57041-67-5	CHF ₂ OCHF ₂ CF ₃	989
HFE-236fa	20193-67-3	CF ₃ CH ₂ OCF ₃	487
HFE-338mcf2	156053-88-2	CF ₃ CF ₂ OCH ₂ CF ₃	552
HFE-338mmz1	26103-08-2	CHF ₂ OCH(CF ₃) ₂	380
HFE-338pcc13 (HG-01)	188690-78-0	CHF ₂ OCF ₂ CF ₂ OCHF ₂	1,500
HFE-43-10pccc (H-Galden1040x, HG-11)	E1730133	CHF ₂ OCF ₂ OC ₂ F ₄ OCHF ₂	1,870
HCFE-235ca2 (Enflurane)	13838-16-9	CHF ₂ OCF ₂ CHFCl	583
HCFE-235da2 (Isoflurane)	26675-46-7	CHF ₂ OCHClCF ₃	350
HG-02	205367-61-9	HF ₂ C-(OCF ₂ CF ₂) ₂ -OCF ₂ H	3,825
HG-03	173350-37-3	HF ₂ C-(OCF ₂ CF ₂) ₃ -OCF ₂ H	3,670
HG-20	249932-25-0	HF ₂ C-(OCF ₂) ₂ -OCF ₂ H	5,300
HG-21	249932-26-1	HF ₂ C-OCF ₂ CF ₂ OCF ₂ OCF ₂ O- CF ₂ H	3,890
HG-30	188690-77-9	HF ₂ C-(OCF ₂) ₃ -OCF ₂ H	7,330
1,1,3,3,4,4,6,6,7,7,9,10,10,12,12,13,13,15,15-eicosafuoro-2,5,8,11,14-Pentaoxapentadecane	173350-38-4	HCF ₂ O(CF ₂ CF ₂ O) ₄ CF ₂ H	3,630
1,1,2-Trifluoro-2-(trifluoromethoxy)-ethane	84011-06-3	CHF ₂ CHFOCF ₃	1,240
Trifluoro(fluoromethoxy)methane	2261-01-0	CF ₂ FOCF ₃	751

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Saturated HFEs and HCFEs with 3 or More Carbon-Hydrogen Bonds			
HFE-143a	421-14-7	CH ₃ OCF ₃	756
HFE-245cb2	22410-44-2	CH ₃ OCF ₂ CF ₃	708
HFE-245fa1	84011-15-4	CHF ₂ CH ₂ OCF ₃	286
HFE-245fa2	1885-48-9	CHF ₂ OCH ₂ CF ₃	659
HFE-254cb2	425-88-7	CH ₃ OCF ₂ CHF ₂	359
HFE-263fb2	460-43-5	CF ₃ CH ₂ OCH ₃	11
HFE-263m1; R-E-143a	690-22-2	CF ₃ OCH ₂ CH ₃	29
HFE-347mcc3 (HFE-7000)	375-03-1	CH ₃ OCF ₂ CF ₂ CF ₃	575
HFE-347mcf2	171182-95-9	CF ₃ CF ₂ OCH ₂ CHF ₂	374
HFE-347mmy1	22052-84-2	CH ₃ OCF(CF ₃) ₂	343
HFE-347mmz1 (Sevoflurane)	28523-86-6	(CF ₃) ₂ CHOCH ₂ F	216
HFE-347pcf2	406-78-0	CHF ₂ CF ₂ OCH ₂ CF ₃	580
HFE-356mec3	382-34-3	CH ₃ OCF ₂ CHF ₂ CF ₃	101
HFE-356mff2	333-36-8	CF ₃ CH ₂ OCH ₂ CF ₃	17
HFE-356mmz1	13171-18-1	(CF ₃) ₂ CHOCH ₃	27
HFE-356pcc3	160620-20-2	CH ₃ OCF ₂ CF ₂ CHF ₂	110
HFE-356pcf2	50807-77-7	CHF ₂ CH ₂ OCF ₂ CHF ₂	265
HFE-356pcf3	35042-99-0	CHF ₂ OCH ₂ CF ₂ CHF ₂	502
HFE-365mcf2	22052-81-9	CF ₃ CF ₂ OCH ₂ CH ₃	58
HFE-365mcf3	378-16-5	CF ₃ CF ₂ CH ₂ OCH ₃	11
HFE-374pc2	512-51-6	CH ₃ CH ₂ OCF ₂ CHF ₂	557
HFE-449s1† (HFE-7100) Chemical blend	163702-07-6 163702-08-7	C ₄ F ₉ OCH ₃ (CF ₃) ₂ CF ₂ OCH ₃	297
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4 163702-06-5	C ₄ F ₉ OC ₂ H ₅ (CF ₃) ₂ CF ₂ OC ₂ H ₅	59
HG'-01	73287-23-7	CH ₃ OCF ₂ CF ₂ OCH ₃	222
HG'-02	485399-46-0	CH ₃ O(CF ₂ CF ₂ O) ₂ CH ₃	236
HG'-03	485399-48-2	CH ₃ O(CF ₂ CF ₂ O) ₃ CH ₃	221
Difluoro(methoxy)methane	359-15-9	CH ₃ OCHF ₂	144
2-Chloro-1,1,2-trifluoro-1-methoxyethane	425-87-6	CH ₃ OCF ₂ CH ₂ Cl	122
1-Ethoxy-1,1,2,2,3,3,3-heptafluoropropane	22052-86-4	CF ₃ CF ₂ CF ₂ OCH ₂ CH ₃	61
2-Ethoxy-3,3,4,4,5-pentafluorotetrahydro-2,5-bis[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-furan	920979-28-8	C ₁₂ H ₅ F ₁₉ O ₂	56
1-Ethoxy-1,1,2,3,3,3-hexafluoropropane	380-34-7	CF ₃ CH ₂ CF ₂ OCH ₂ CH ₃	23
Fluoro(methoxy)methane	460-22-0	CH ₃ OCH ₂ F	13
1,1,2,2-Tetrafluoro-3-methoxy-propane; Methyl 2,2,3,3-tetrafluoro propyl ether	60598-17-6	CHF ₂ CF ₂ CH ₂ OCH ₃	0.5
1,1,2,2-Tetrafluoro-1-(fluoromethoxy)ethane	37031-31-5	CH ₂ FOCF ₂ CF ₂ H	871
Difluoro(fluoromethoxy)methane	461-63-2	CH ₂ FOCHF ₂	617
Fluoro(fluoromethoxy)methane	462-51-1	CH ₂ FOCH ₂ F	130

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Fluorinated Formates			
Trifluoromethyl formate	85358-65-2	HCOOCF ₃	588
Perfluoroethyl formate	313064-40-3	HCOOCF ₂ CF ₃	580
1,2,2,2-Tetrafluoroethyl formate	481631-19-0	HCOOCHF ₂ CF ₃	470
Perfluorobutyl formate	197218-56-7	HCOOCF ₂ CF ₂ CF ₂ CF ₃	392
Perfluoropropyl formate	271257-42-2	HCOOCF ₂ CF ₂ CF ₃	376
1,1,1,3,3,3-Hexafluoropropan-2-yl formate	856766-70-6	HCOOCH(CF ₃) ₂	333
2,2,2-Trifluoroethyl formate	32042-38-9	HCOOCH ₂ CF ₃	33
3,3,3-Trifluoropropyl formate	1344118-09-7	HCOOCH ₂ CH ₂ CF ₃	17
Fluorinated Acetates			
Methyl 2,2,2-trifluoroacetate	431-47-0	CF ₃ COOCH ₃	52
1,1-Difluoroethyl 2,2,2-trifluoroacetate	1344118-13-3	CF ₃ COOCF ₂ CH ₃	31
Difluoromethyl 2,2,2-trifluoroacetate	2024-86-4	CF ₃ COOCHF ₂	27
2,2,2-Trifluoroethyl 2,2,2-trifluoroacetate	407-38-5	CF ₃ COOCH ₂ CF ₃	7
Methyl 2,2-difluoroacetate	433-53-4	HCF ₂ COOCH ₃	3
Perfluoroethyl acetate	343269-97-6	CH ₃ COOCF ₂ CF ₃	2.1
Trifluoromethyl acetate	74123-20-9	CH ₃ COOCF ₃	2.0
Perfluoropropyl acetate	1344118-10-0	CH ₃ COOCF ₂ CF ₂ CF ₃	1.8
Perfluorobutyl acetate	209597-28-4	CH ₃ COOCF ₂ CF ₂ CF ₂ CF ₃	1.6
Ethyl 2,2,2-trifluoroacetate	383-63-1	CF ₃ COOCH ₂ CH ₃	1.3
Carbonfluoridates			
Methyl carbonofluoridate	1538-06-3	FCOOCH ₃	95
1,1-Difluoroethyl carbonofluoridate	1344118-11-1	FCOOCF ₂ CH ₃	27
Fluorinated Alcohols Other Than Fluorotelomer Alcohols			
Bis(trifluoromethyl)-methanol	920-66-1	(CF ₃) ₂ CHOH	195
(Octafluorotetramethyl-ene) hydroxymethyl group	NA	X-(CF ₂) ₄ CH(OH)-X	73
2,2,3,3,3-Pentafluoropropanol	422-05-9	CF ₃ CF ₂ CH ₂ OH	42
2,2,3,3,4,4,4-Heptafluorobutan-1-ol	375-01-9	C ₃ F ₇ CH ₂ OH	25
2,2,2-Trifluoroethanol	75-89-8	CF ₃ CH ₂ OH	20
2,2,3,4,4,4-Hexafluoro-1-butanol	382-31-0	CF ₃ CHF ₂ CF ₂ CH ₂ OH	17
2,2,3,3-Tetrafluoro-1-propanol	76-37-9	CHF ₂ CF ₂ CH ₂ OH	13
2,2-Difluoroethanol	359-13-7	CHF ₂ CH ₂ OH	3
2-Fluoroethanol	371-62-0	CH ₂ FCH ₂ OH	1.1
4,4,4-Trifluorobutan-1-ol	461-18-7	CF ₃ (CH ₂) ₂ CH ₂ OH	0.05
Unsaturated Perfluorocarbons (PFCs)			
PFC-1114; TFE	116-14-3	CF ₂ = CF ₂ ; C ₂ F ₄	0.004
PFC-1216; Dyneon HFP	116-15-4	C ₃ F ₆ ; CF ₃ CF = CF ₂	0.05
PFC C-1418	559-40-0	c-C ₅ F ₈	1.97
Perfluorobut-2-ene	360-89-4	CF ₃ CF = CF ₂ CF ₃	1.82
Perfluorobut-1-ene	357-26-6	CF ₃ CF ₂ CF = CF ₂	0.10
Perfluorobuta-1,3-diene	685-63-2	CF ₂ = CF ₂ CF = CF ₂	0.003

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Unsaturated Hydrofluorocarbons (HFCs) and Hydrochlorofluorocarbons (HCFCs)			
HFC-1132a; VF2	75-38-7	$C_2H_2F_2$; $CF_2 = CH_2$	0.04
HFC-1141; VF	75-02-5	C_2H_3F ; $CH_2 = CHF$	0.02
(E)-HFC-1125ye	5595-10-8	$CF_3CF = CHF(E)$	0.06
(Z)-HFC-1125ye	5528-43-8	$CF_3CF = CHF(Z)$	0.22
Solstice 1233zd(E)	102687-65-0	$C_3H_2ClF_3$; $CHCl=CHCF_3$	1.34
HFC-1234yf; HFO-1234yf	754-12-1	$C_3H_2F_4$; $CF_3CF = CH_2$	0.31
HFC-1234ze(E)	1645-83-6	$C_3H_2F_4$; $trans-CF_3CH = CHF$	0.97
HFC-1234ze(Z)	29118-25-0	$C_3H_2F_4$; $cis-CF_3CH = CHF$; $CF_3CH = CHF$	0.29
HFC-1243zf; TFP	677-21-4	$C_3H_3F_3$; $CF_3CH = CH_2$	0.12
(Z)-HFC-1336	692-49-9	$CF_3CH = CHCF_3(Z)$	1.58
HFC-1345zfc	374-27-6	$C_2F_5CH = CH_2$	0.09
Capstone 42-U	19430-93-4	$C_6H_3F_9$; $CF_3(CF_2)_3CH = CH_2$	0.16
Capstone 62-U	25291-17-2	$C_8H_3F_{13}$; $CF_3(CF_2)_5CH = CH_2$	0.11
Capstone 82-U	21652-58-4	$C_{10}H_3F_{17}$; $CF_3(CF_2)_7CH = CH_2$	0.09
Unsaturated Halogenated Ethers			
PMVE; HFE-216	1187-93-5	$CF_3OCF = CF_2$	0.17
Fluoroxene	406-90-6	$CF_3CH_2OCH = CH_2$	0.05
Fluorinated Aldehydes			
3,3,3-Trifluoro-propanol	460-40-2	CF_3CH_2CHO	0.01
Fluorinated Ketones			
Novec 1230 (perfluoro (2-methyl-3-pentanone))	756-13-8	$CF_3CF_2C(O)CF(CF_3)_2$	0.1
Fluorotelomer Alcohols			
3,3,4,4,5,5,6,6,7,7,7-Undecafluoroheptan-1-ol	185689-57-0	$CF_3(CF_2)_4CH_2CH_2OH$	0.43
3,3,3-Trifluoropropan-1-ol	2240-88-2	$CF_3CH_2CH_2OH$	0.35
3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-Pentadecafluorononan-1-ol	755-02-2	$CF_3(CF_2)_6CH_2CH_2OH$	0.33
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-Nonadecafluoroundecan-1-ol	87017-97-8	$CF_3(CF_2)_8CH_2CH_2OH$	0.19
Fluorinated GHGs with Carbon-Iodine Bond(s)			
Trifluoroiodomethane	2314-97-8	CF_3I	0.4
Other Fluorinated Compounds			
Dibromodifluoromethane (Halon 1202)	75-61-6	CF_2Br_2	231
2-Bromo-2-chloro-1,1,1-trifluoroethane (Halon-2311/Halothane)	151-67-7	$CHBrClCF_3$	41

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Default GWPs for Compounds for Which Chemical-Specific GWPs Are Not Listed Above			
Fluorinated GHG Group¹			Global warming potential (100 yr.)
Fully fluorinated GHGs			10,000
Saturated hydrofluorocarbons (HFCs) with 2 or fewer carbon-hydrogen bonds			3,700
Saturated HFCs with 3 or more carbon-hydrogen bonds			930
Saturated hydrofluoroethers (HFEs) and hydrochlorofluoroethers (HCFEs) with 1 carbon-hydrogen bond			5,700
Saturated HFEs and HCFEs with 2 carbon-hydrogen bonds			2,600
Saturated HFEs and HCFEs with 3 or more carbon-hydrogen bonds			270
Fluorinated formats			350
Fluorinated acetates, carbonofluoridates, and fluorinated alcohols other than fluorotelomer alcohols			30
Unsaturated perfluorocarbons (PFCs), unsaturated HFCs, unsaturated hydrochlorofluorocarbons (HCFCs), unsaturated halogenated ethers, unsaturated halogenated esters, fluorinated aldehydes, and fluorinated ketones			1
Fluorotelomer alcohols			1
Fluorinated GHGs with carbon-iodine bond(s)			1
Other fluorinated GHG			2,000

¹ For electronics manufacturing (as defined in 40 CFR §98.90), the term “fluorinated GHGs” in the definition of each fluorinated GHG group in §98.6 shall include fluorinated heat transfer fluids (as defined in §98.98), whether or not they are also fluorinated GHGs.