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Health Dept. Iowa Air Pollution  
Control Commission

RULES & REGULATIONS RELATING  
TO AIR POLLUTION CONTROL

16 June 72 C.1

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IOWA AIR POLLUTION CONTROL COMMISSION  
IOWA STATE DEPARTMENT OF HEALTH

RULES AND REGULATIONS RELATING TO  
AIR POLLUTION CONTROL

Effective date June 16, 1972

CHAPTER 1  
DEFINITIONS

1.1 (136B) General.

1.1(1) Meaning. For the purpose of these rules and regulations, the following terms shall have the meaning indicated in this chapter. The definitions set out in Section 136B.2, Code of Iowa, 1971, shall be considered to be incorporated verbatim in these rules.

1.1(2) Scope. No attempt is made to define ordinary words which are used in accordance with their established dictionary meanings, except where the context otherwise requires and it is necessary to define the meaning as used in these rules and regulations to avoid misunderstanding.

1.2 (136B) Definition of terms.

1.2(1) Air pollution alert. That action condition declared when the concentrations of air contaminants reach the level at which the first stage control actions are to begin.

1.2(2) Air pollution emergency. That action condition declared when the air quality is continuing to degrade to a level that should never be reached, and that the most stringent control actions are necessary.

1.2(3) Air pollution episode. A combination of forecast or actual meteorological conditions and emissions of air contaminants which may or do present an imminent and substantial endangerment to the health of persons, during which the chief meteorological factors are the absence of winds that disperse air contaminants horizontally and a stable atmospheric layer which tends to inhibit vertical mixing through relatively deep layers.

1.2(4) Air pollution forecast. An air stagnation advisory issued to the Department, the Commission, and to appropriate air pollution control agencies by an authorized Air Stagnation Advisory Office of the National Weather Service predicting that meteorological conditions conducive to an air pollution episode may be imminent. This advisory may be followed by a prediction of the duration and termination of such meteorological conditions.



1.2(5) Air pollution warning. That action condition declared when the air quality is continuing to degrade from the levels classified as an air pollution alert, and where control actions in addition to those conducted under an air pollution alert are necessary.

1.2(6) Air quality standard. An allowable level of air contaminants or atmospheric air concentrations established by the Commission.

1.2(7) ASME. The American Society of Mechanical Engineers, 345 East 47th Street, New York, New York.

1.2(8) ASTM. The American Society for Testing Materials, 1916 Race Street, Philadelphia, Pennsylvania.

1.2(9) Auxiliary fuel firing equipment. Equipment to supply additional heat, by the combustion of an auxiliary fuel, for the purpose of attaining temperatures sufficient to dry and ignite waste material, to maintain ignition thereof, and to promote complete combustion of combustible gases, solids, and vapors.

1.2(10) Backyard burning. The disposal of residential waste by open burning on the premises of the property where such waste is generated.

1.2(11) BTU. British Thermal Unit, the quantity of heat required to raise the temperature of one (1) pound of water from fifty-nine (59) degrees Fahrenheit to sixty (60) degrees Fahrenheit.

1.2(12) Carbonaceous fuel. Any form of combustible matter (whether solid, liquid, vapor, or gas) consisting primarily of carbon-containing compounds in either fixed or volatile form, and which is burned primarily for its heat content.

1.2(13) Chimney or stack. Any flue, conduit, or duct permitting the discharge or passage of air contaminants into the open air, or constructed or arranged for this purpose.

1.2(14) Coh/1000 linear feet. Coefficient of haze per 1000 linear feet, which is a measure of the optical density of a filtered deposit of particulate matter as given in ASTM Standard D-1704-61, and indicated by the following formula:

$$\text{Coh/1000 linear feet: } \frac{(\text{Area tape, ft}^2) (100,000)}{(\text{Volume of air sample, ft}^3)} \log \frac{100}{\text{Percent transmission}}$$

1.2(15) Combustion for indirect heating. The combustion of fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to, the products of combustion.

1.2(16) Control equipment. Any equipment that has the function to prevent the formation of or the emission to the atmosphere of air contaminants from any fuel burning, incinerator, or process equipment.



1.2(17) Criteria. Information used as guidelines for decisions when establishing air quality goals, air quality standards, and the various air quality levels, and which in no case is to be confused or used interchangeably with air quality goals or standards.

1.2(18) Electric furnace. A furnace in which the melting and refining of metals are accomplished by means of electrical energy.

1.2(19) Emission standard. The maximum allowable discharge rate of any given air contaminant to the atmosphere as established by the Commission.

1.2(20) Equipment. Equipment capable of emitting air contaminants to produce air pollution such as fuel burning, combustion, or process devices or apparatus including, but not limited to, fuel burning equipment, refuse-burning equipment used for the burning of fuel or other combustible material from which the products of combustion are emitted; and including, but not limited to, apparatus, equipment, or process devices which generate heat and may emit products of combustion, and manufacturing, chemical, metallurgical, or mechanical apparatus or process devices which may emit smoke, particulate matter, or other air contaminants.

1.2(21) Excess air. That amount of air supplied in addition to the theoretical quantity necessary for complete combustion of all fuel or combustible waste material present.

1.2(22) Existing equipment. Equipment, machines, devices, or installations that are in operation at the effective date of these rules and regulations.

1.2(23) Foundry cupola. A stack-type furnace used for melting of metals, consisting of, but not limited to, the furnace proper, tuyeres, fans, or blowers, tapping spout, charging equipment, gas cleaning devices, and other auxiliaries.

1.2(24) Fugitive dust. Any airborne particulate solid matter emitted from any source other than a flue or stack.

1.2(25) Garbage. All solid and semi-solid putrescible and nonputrescible animal and vegetable wastes resulting from the handling, preparing, cooking, storing, and serving of food or of materials intended for use as food, but excluding recognized industrial byproducts.

1.2(26) Gas cleaning device. A facility designed to remove air contaminants from gases exhausted from equipment as defined herein.

1.2(27) Goal. A level of air quality which is expected to be obtained.

1.2(28) Heating value. The heat released by combustion of one (1) pound of waste or fuel measured in BTU's on an as received basis. For solid fuels, the heating value shall be determined by use of ASTM Standard D2015-66.

1.2(29) Incinerator. A combustion apparatus designed for high temperature operation in which solid, semi-solid, liquid, or gaseous combustible wastes are ignited and burned efficiently, and from which the solid residues contain little or no combustible material.



1.2(30) Landscape waste. Any vegetable or plant wastes except garbage. The term includes trees, tree trimmings, branches, stumps, brush, weeds, leaves, grass, shrubbery, and yard trimmings.

1.2(31) Level. A certain specified degree, quality, or characteristic.

1.2(32) New Equipment. Any equipment or control equipment not under construction or for which components have not been purchased on the effective date of these rules and regulations, and any equipment which is altered or modified after such date, which may cause the emission of air contaminants or eliminate, reduce, or control the emissions of air contaminants.

1.2(33) Objectionable odor. An odor that is believed to be objectionable by thirty (30) percent or more of a random sample of the people exposed to such odor, with the sample size of at least thirty (30) people.

1.2(34) Objective. A certain specified degree, quality, or characteristic expected to be attained.

1.2(35) Opacity. A state which renders material partially or wholly impervious to rays of light and causes obstruction of the view of the observer.

1.2(36) Open burning. Any burning of combustible materials where the products of combustion are emitted into the open air without passing through a chimney or stack.

1.2(37) Particulate matter. Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

1.2(38) Parts per million (PPM). A term which expresses the volumetric concentration of one material in one million (1,000,000) unit volumes of a carrier material.

1.2(39) Plan documents. The reports, proposals, preliminary plans, survey and basis of design data, general and detail construction plans, profiles, specifications, and all other information pertaining to equipment.

1.2(40) Process. Any action, operation or treatment, and all methods and forms of manufacturing or processing, that may emit smoke, particulate matter, gaseous matter, or other air contaminant.

1.2(41) Process weight. The total weight of all materials introduced into any source operation. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.



1.2(42) Process weight rate. For continuous or long-run steady-state source operation, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof; or for a cyclical or batch source operation, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the number of hours of actual process operation during such a period. 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 definition, the interpretation that results in the minimum value for the allowable emission shall apply.

1.2(43) Refuse. Garbage, rubbish, and all other putrescible and nonputrescible wastes, except sewage and water-carried trade wastes.

1.2(44) Residential waste. Any refuse generated on the premises as a result of residential activities. The term includes landscape wastes grown on the premises or deposited thereon by the elements, but excludes garbage, tires, and trade wastes.

1.2(45) Ringelmann Chart. The chart published and described in Information Circular 8333, Bureau of Mines, U. S. Department of Interior, and on which are illustrated graduated shades of gray to black for use in estimating the apparent density of smoke from combustion stacks.

1.2(46) Rubbish. All waste materials of nonputrescible nature.

1.2(47) Salvage operations. Any business, industry, or trade engaged wholly or in part in salvaging or reclaiming any product or material, including, but not limited to, chemicals, drums, metals, motor vehicles; or shipping containers.

1.2(48) Smoke. Gas-borne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, and other combustible material, or ash, that form a visible plume in the air.

1.2(49) Smoke monitor. A device using a light source and a light detector which can automatically measure and record the light-obscuring power of smoke at a specific location in the flue or stack of a source.

1.2(50) Source operation. The last operation preceding the emission of an air contaminant, and which results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, but is not an air pollution control operation.

1.2(51) Standard conditions. A gas temperature of seventy (70) degrees Fahrenheit and a gas pressure of twenty-nine point nine two (29.92) inches of mercury absolute.

1.2(52) Standard cubic foot (SCF). The volume of one (1) cubic foot of gas at standard conditions.



1.2(53) Standard Metropolitan Statistical Area (SMSA). An area which has at least one (1) city with a population of at least fifty thousand (50,000), and such surrounding areas as geographically defined by the U. S. Bureau of the Budget.

1.2(54) Stationary source. Any building, structure, facility, or installation which emits or may emit any air pollutant.

1.2(55) Theoretical air. The exact amount of air required to supply the required oxygen for complete combustion of a given quantity of a specific fuel or waste.

1.2(56) Trade waste. Any refuse resulting from the prosecution of any trade, business, industry, commercial venture (including farming and ranching), or utility or service activity, and any governmental or institutional activity, whether or not for profit.

1.2(57) Variance. A temporary waiver from rules, regulations, or standards governing the quality, nature, duration, or extent of emissions granted by the Commission for a specified period of time.

## CHAPTER 2 COMPLIANCE

### 2.1 (136B) Compliance Schedule.

2.1(1) New equipment. All new equipment and all new control equipment, as defined herein, installed in this state shall perform in conformance with applicable emission standards specified in Chapter 4 of these rules and regulations.

2.1(2) Existing equipment. All existing equipment, as defined herein, shall be in conformance with applicable emission standards specified for new equipment in Chapter 4 of these rules and regulations, or as otherwise specified herein.

2.1(3) Emissions inventory. The person responsible for equipment as defined herein shall provide information on fuel use, materials processed, air contaminants emitted, estimated rate of emissions, periods of emissions, or other air pollution information to the Technical Secretary upon his written request for use in compiling and maintaining an emissions inventory for evaluation of the air pollution situation in the State and its various parts. The information requested shall be submitted on forms supplied by the Department. Any publication of such data shall be in a manner that does not divulge or reveal the identity of the installation or its owner.



CHAPTER 3  
RULES FOR CONTROLLING POLLUTION

3.1 (136B) Permits.

3.1(1) Permit required. Each person planning to construct, install, reconstruct, or alter any equipment as defined in subsection 1.2(20) of these rules and regulations, or related control equipment, as defined in subsection 1.2(16) of these rules and regulations, shall obtain a permit for the proposed equipment or related control equipment from the Department, prior to the initiation of construction, installation, or alteration. Said permit will not be required if the alterations to the equipment will not change the emissions from that equipment.

a. Application for permit. Each application for a permit shall be submitted to the Department on the form "Application for a Permit to Install or Alter Equipment or Control Equipment". Plans and specifications relating to the proposed equipment shall be submitted with the application for a permit.

b. Preparation of plans. All plans and specifications for equipment and related control equipment, as defined herein, shall be prepared by or under the direct supervision of an engineer in conformance with Chapter 114, Code of Iowa, 1971.

c. Information required. The plans and specifications submitted shall include the following information.

- (1) The equipment or control equipment covered by the application;
- (2) The plot plan, including the distance and height for nearby buildings, and location and elevation of the emission points;
- (3) The composition of the effluent stream, both before and after any control equipment, with estimates of emission rates, concentration, volume, and temperature;
- (4) The physical and chemical characteristics of the air contaminants;
- (5) Any tests to be made of the completed installation by the owner;
- (6) The sampling holes, scaffolding, power sources for operation of appropriate sampling instruments, and pertinent allied facilities for making tests to ascertain compliance; and
- (7) Any additional information as is deemed necessary by the Department to determine compliance with these rules and regulations.

3.1(2) Processing of applications for permits. The Department shall notify the applicant in writing of the issuance or denial of a permit as soon as practicable, at least within sixty (60) days. When this schedule would cause undue hardship to an applicant, or materially handicap this need for proceeding promptly with the proposed installation, modification, or location, a request for priority consideration and the justification therefor shall be submitted to the Department.



a. Issuing of permit. A permit shall be issued when the Department concludes that the plans and specifications represent equipment which should comply with the requirements specified in these rules and regulations. A permit may be issued subject to conditions which shall be specified in writing.

(1) Each permit shall specify the date on which it becomes void if work on the installation for which it was issued has not been initiated by that date.

(2) Such permit is not transferable from one location to another, unless the equipment is portable, or from one piece of equipment to another.

(3) If changes are proposed in the plans and specifications after a permit has been issued, a supplemental permit incorporating such changes shall be obtained.

(4) Each permit shall require the Department to be notified at least ten (10) days before the equipment or control equipment involved is placed in operation.

(5) When portable equipment for which a permit has been issued is transferred from one location to another, the Department shall be notified prior to beginning operation at the new location.

b. Denial of permit. When an application for a permit is denied, the applicant shall be notified in writing of the reasons therefor. Such a denial shall be without prejudice to the right of the applicant for filing a further application after revisions are made to meet the objections specified as reasons for the denial.

3.1(3) Exemptions from permit requirements. The provisions of this section shall not apply to the items listed below.

a. Fuel burning equipment for indirect heating and reheating furnaces using natural or liquified petroleum gas, or Number 2 fuel oil, with a capacity of less than fifty (50) million BTU per hour input.

b. Fuel burning equipment for indirect heating with a capacity less than one (1) million BTU per hour input when burning coal or oil.

c. Mobile internal combustion and jet engines, marine installation, and locomotives.

d. Equipment used on farms and ranches for agricultural purposes, except equipment as listed in subsection 4.4(7) of these rules and regulations.

3.2 (136B) Variiances.

3.2(1) Application for variiances. A person may make application for a variance from applicable emission standards specified in Chapter 4, or other provisions specified in these rules and regulations.

a. Contents. Each application for a variance shall be submitted to the Technical Secretary, stating the following:



(1) The name, address, and telephone number of the person submitting the application or, if such person is a legal entity, the name and address of the individual authorized to accept service of process on its behalf and the name of the person in charge of the premises where the pertinent activities are conducted.

(2) The type of business or activity involved.

(3) The nature of the operation or process involved; including information on the air contaminants emitted, the chemical and physical properties of such emissions, and the estimated amount and rate of discharge of such emissions.

(4) The exact location of the operation or process involved.

(5) The reason or reasons for considering that compliance with the provisions specified in these rules and regulations will produce serious hardship without equal or greater benefits to the public, and the reasons why no other reasonable method can be used for such operations without resulting in a hazard to health or property.

(6) Each application shall bear the signature of the person making the application, following an affirmation that all statements are true and correct.

b. Variance extension. The request for extension of a variance shall be accompanied by one of the following applicable items:

(1) A letter of intent as specified in section 3.3 of these rules and regulations.

(2) An emission reduction program as specified in section 3.4 of these rules and regulations.

3.2(2) Processing of applications. Each application for a variance and its supporting material shall be reviewed and an investigation of the facilities shall be made by the Department, for evaluation of whether or not the emissions involved will produce the following effects.

a. Endanger human health. Endanger or tend to endanger the health of persons residing in or otherwise occupying the area specified by said emissions.

b. Create safety hazards. Create or tend to create safety hazards, such as (but not limited to) interference with traffic due to reduced visibility.

c. Damage livestock or plant life. Damage or tend to damage any livestock harbored on, or any plant life on, property that is affected by said emissions and under other ownership.

d. Damage property. Damage or tend to damage any property on land that is affected by said emissions and under other ownership.



3.2(3) Recommendation for action. Upon completion of its investigation, the Department shall submit the findings and a recommendation for appropriate action to the Commission.

a. Granting of variance. The Commission shall grant a variance when it concludes that such action is appropriate. The variance may be granted subject to conditions specified by the Commission. The Commission shall specify such time intervals as are considered appropriate for submission of reports on the progress attained in the emission reduction program.

b. Denial of variance. The Commission shall deny a variance when it concludes that such action is appropriate. A denial shall be without prejudice to the right of the applicant to request a review hearing before the Commission.

### 3.3 (136B) Letter of Intent.

3.3(1) Contents. A letter of intent to file an emission reduction program submitted pursuant to these rules and regulations shall include information on the following items pertaining to each source operation.

a. Raw materials. The quantity and type of raw materials processed.

b. Emissions. An estimate of the quantity and type of emissions to the atmosphere.

c. Emission sources. A listing of those source operations which are considered major sources of air contaminant emissions.

d. Control equipment. A listing of the existing pollution control devices, and an estimate of their efficiency.

e. Anticipated problems. Comments regarding particular problems anticipated in reducing emissions.

f. Emission reduction program submission date. The date when a detailed air contaminant emission reduction program pertaining to each source operation will be submitted to the Department. Such date shall not be later than six (6) months after filing the letter of intent.

g. Additional information. Such additional information as may be required by the Commission.

### 3.4 (136B) Emission reduction program.

3.4(1) Contents. An air contaminant emission reduction program submitted to the Department pursuant to these rules and regulations shall include a schedule for the installation of pollution control devices, or the replacement or alteration of specified facilities in such a way that emissions of air contaminants are reduced to comply with the emission standards specified in Chapter 4 of these rules and regulations.



3.4(2) Review. The Department shall review all programs submitted, and shall make recommendations to the Commission with respect to whether these programs are adequate and reasonable.

a. Commission action. Upon receiving the recommendation of the Department, the Commission may approve or disapprove such programs.

(1) If an approved program is being implemented as scheduled, the person involved shall not be considered to be in violation of these rules and regulations.

(2) If the Department recommends disapproval of a program, the disapproval shall be without prejudice to the right of the applicant to request a review hearing before the Commission, and the applicant shall have a period of thirty (30) days from date of notification by the Commission in which to request a review hearing.

3.4(3) Reports. Each person responsible for an approved program shall make periodic written progress reports to the Department, as specified by the Department. The Department shall make periodic reports to the Commission on emission reduction program submitted, and on the recommendations related to such programs.

#### CHAPTER 4 EMISSION STANDARDS FOR CONTAMINANTS

##### 4.1 (136B) Emission Standards.

4.1(1) Application. Compliance with emission standards specified in this chapter shall be in accordance with Chapter 2 of these rules and regulations. The following standards shall be considered as operation or performance standards, rather than design standards.

##### 4.2 (136B) Open Burning.

4.2(1) Prohibition. No person shall allow, cause, or permit open burning of combustible materials, except as provided in subsections 4.2(2) and 4.2(3).

4.2(2) Variations from rules. Any person wishing to conduct open burning of materials not exempted in subsection 4.2(3) may make application for a variance as specified in subsection 3.2(1) of these rules and regulations.

4.2(3) Exemptions. The following shall be permitted unless prohibited by local ordinances or regulations.

a. Disaster rubbish. The open burning of rubbish, including landscape waste, for the duration of the community disaster period in cases where an officially declared emergency condition exists.



b. Diseased trees. The open burning of diseased trees. However, when the burning of diseased trees causes a nuisance, the Commission may take appropriate action to secure relocation of the burning operation. Rubber tires shall not be used to ignite diseased trees.

c. Flare stacks. The open burning or flaring of waste gases, providing such open burning or flaring is conducted in compliance with paragraphs 4.3(2)d and 4.3(3)d of these rules and regulations.

d. Landscape waste. The disposal by open burning of landscape waste originating on the premises. However, the burning of landscape waste produced in clearing, grubbing, and construction operations shall be limited to areas located at least one-fourth (1/4) mile from any inhabited building. Rubber tires shall not be used to ignite landscape waste.

e. Recreational fires. Open fires for cooking, heating, recreation, and ceremonies, provided they comply with paragraph 4.3(2)d of these rules and regulations.

f. Residential waste. Backyard burning of residential waste at dwellings of four (4) family units or less. The adoption of more restrictive ordinances or regulations of a governing body of the political subdivision, relating to control of backyard burning, shall not be precluded by these rules and regulations.

g. Training fires. Fires set for the purpose of bona fide training public or industrial employees in fire fighting methods, provided that the Technical Secretary receives notice in writing at least one week before such action commences.

#### 4.3 (136B) Specific Contaminants.

4.3(1) General. The emission standards contained in this section shall apply to each source operation unless a specific emission standard for the process involved is prescribed elsewhere in this chapter, in which case the specific standard shall apply.

4.3(2) Particulate matter. No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in Chapter 5 of these rules and regulations.

a. Process weight. The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in section 3.2, section 4.4, and Chapter 5 of these rules and regulations.



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

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

\*Interpolation of the data in this table for process weight rates up to <sup>60</sup>16,000 lb/hr shall be accomplished by the use of the equation

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

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

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

where E = rate of emission in lb/hr, and  
P = process weight in tons/hr



b. Combustion for indirect heating. Emissions of particulate matter from the combustion of fuel for indirect heating or for power generation shall be limited by the ASME Standard APS-1, Second Edition, November, 1968, "Recommended Guide for the Control of Dust Emission - Combustion for Indirect Heat Exchangers". For the purpose of this paragraph, the allowable emissions shall be calculated from equation (15) of that standard, with  $C_{o, 2} = 50$  micrograms per cubic meter. Allowable emissions from a single stack<sup>max</sup> may be estimated from Figure 1. The maximum ground level dust concentrations designated are above the background level. For plants with 4,000 million BTU/hour input or more, the "a" factor shall be one point zero (1.0). In plants with less than 4,000 million BTU/hour input, appropriate "a" factors, less than one point zero (1.0), shall be applied. Pertinent correction factors, as specified in the standard, shall be applied for installations with multiple stacks.

(1) Outside any Standard Metropolitan Statistical Area, the maximum allowable emissions from each stack serving existing equipment, irrespective of height, shall be zero point eight (0.8) pounds of particulates per million BTU input.

(2) Inside any Standard Metropolitan Statistical Area, the maximum allowable emission from each stack, irrespective of height, shall be zero point six (0.6) pounds of particulates per million BTU input.

(3) In new equipment, the maximum allowable emissions from each stack, irrespective of height or location, shall be zero point six (0.6) pounds of particulates per million BTU input.

(4) Measurements of emissions from a particulate source will be made in accordance with the provisions of Chapter 7 of these rules and regulations.

c. Fugitive dust. After September 1, 1972, no person shall allow, cause, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a construction haul road to be used, constructed, altered, repaired, or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in section 657.1, Code of Iowa, 1971, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. Reasonable precautions may include, but not be limited to, the following procedures.

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

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

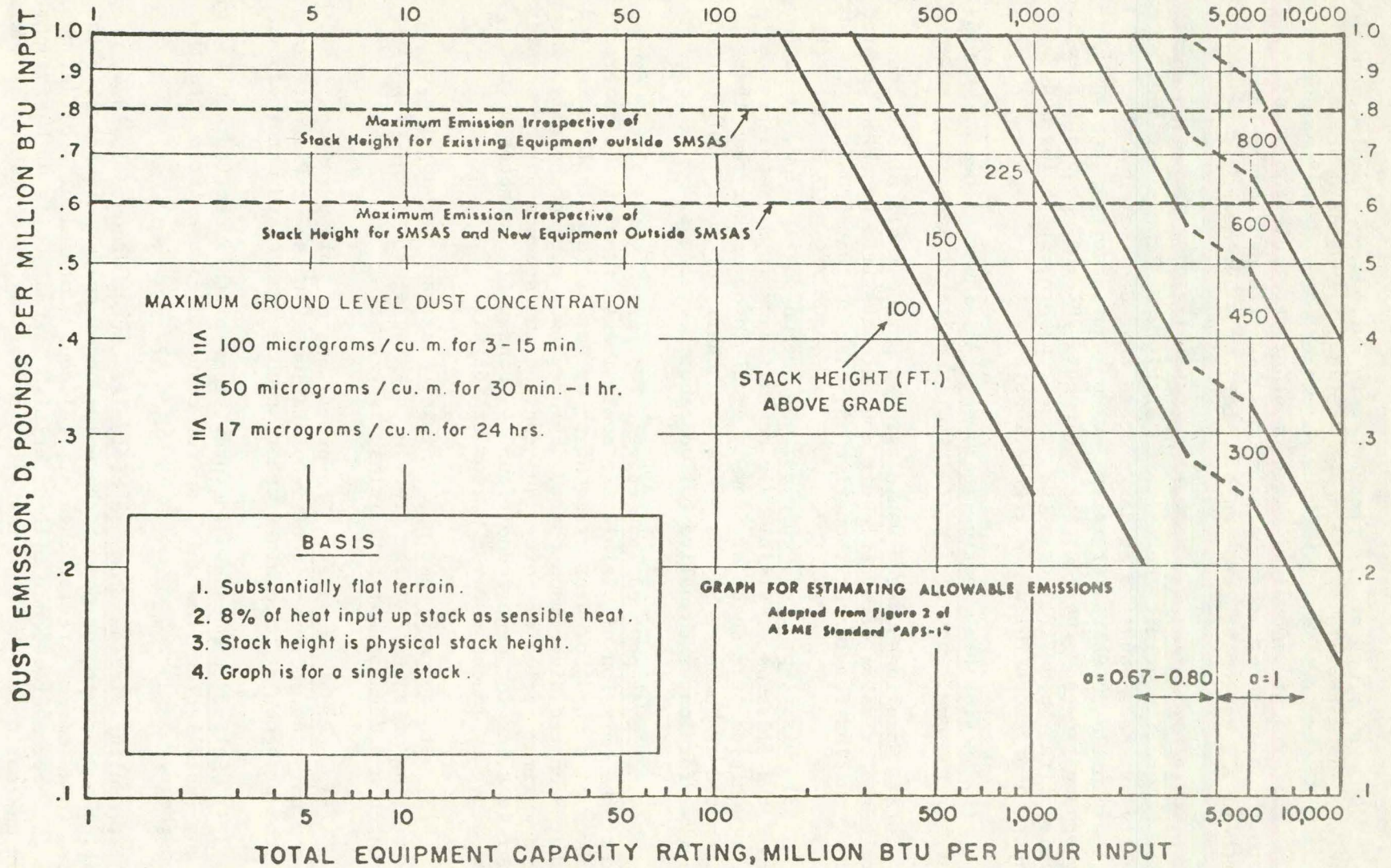
(3) Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer, or limestone.



FIGURE 1

# COMBUSTION FOR INDIRECT HEAT EXCHANGERS

APPROXIMATE STEAM GENERATION, THOUSANDS OF POUNDS PER HOUR





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

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

d. Visible emissions. After September 1, 1972, no person shall allow, cause, or permit the emission of visible air contaminants of a density or shade equal to or darker than that designated as Number 2 on the Ringelmann Chart, or forty (40) percent opacity, into the atmosphere from any fuel-burning equipment, internal combustion engine, premise fire, open fire, or stack, except as provided below and in chapter 5 of these rules and regulations.

(1) Residential heating equipment. Residential heating equipment serving dwellings of four (4) family units or less is exempt.

(2) Gasoline-powered vehicles. No person shall allow, cause, or permit the emission of visible air contaminants from gasoline-powered motor vehicles for longer than five (5) consecutive seconds.

(3) Diesel-powered vehicles. No person shall allow, cause, or permit the emission of visible air contaminants from diesel-powered motor vehicles of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Chart, or forty (40) percent opacity, for longer than five (5) consecutive seconds.

(4) Diesel-powered locomotives. No person shall allow, cause, or permit the emission of visible air contaminants from diesel-powered locomotives of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Chart, or forty (40) percent opacity, except for a maximum period of forty (40) consecutive seconds during acceleration under load, or for a period of four (4) consecutive minutes when a locomotive is loaded after a period of idling.

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

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

4.3(3) Sulfur compounds. The provisions of this section shall apply to any installation from which sulfur compounds are emitted into the atmosphere.

a. Sulfur dioxide from use of fuels. After January 1, 1974, no person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere in an amount greater than six (6) pounds of sulfur dioxide, maximum two (2) hour average, per million British Thermal Units of heat input from any solid fuel-burning installation for any combination of fuels burned; nor the emission of sulfur dioxide into the atmosphere in an amount greater than two point zero (2.0) pounds of sulfur dioxide, maximum two (2) hour average, per million British Thermal Units of heat input from any liquid fuel-burning installation.



After January 1, 1975, no person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere in an amount greater than five (5) pounds of sulfur dioxide, maximum two (2) hour average, per million British Thermal Units of heat input from any solid fuel-burning installation for any combination of fuels burned; nor the emission of sulfur dioxide into the atmosphere in an amount greater than one point five (1.5) pounds of sulfur dioxide, maximum two (2) hour average, per million British Thermal Units of heat input from any liquid fuel-burning installation.

b. Sulfur dioxide from sulfuric acid manufacture. After January 1, 1975, no person shall allow, cause, or permit the emission of sulfur dioxide from a sulfuric acid manufacturing plant in excess of six point five (6.5) pounds of sulfur dioxide, maximum two (2) hour average, per ton of product calculated as one hundred (100) percent sulfuric acid.

c. Acid mist from sulfuric acid manufacture. After January 1, 1974, no person shall allow, cause, or permit the emission of acid mist calculated as sulfuric acid from a sulfuric acid manufacturing plant in excess of zero point five (0.5) pounds, maximum two (2) hour average, per ton of product calculated as one hundred (100) percent sulfuric acid.

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

4.3(4) Nitrogen compounds. The provisions of this section shall apply to any installation from which nitrogen compounds are emitted into the atmosphere.

a. Nitrogen oxides from use of fuel. After January 1, 1974, no person shall allow, cause, or permit the emission of nitrogen oxides from gas-fired fuel burning equipment in excess of zero point two (0.2) pounds, maximum two (2) hour average, calculated as nitrogen dioxide, per million British Thermal Units of heat input; nor the emission of nitrogen oxides from oil-fired fuel burning equipment in excess of zero point three (0.3) pounds, maximum two (2) hour average, calculated as nitrogen dioxide, per million British Thermal Units of heat input.

b. Nitrogen oxides from nitric acid manufacture. After January 1, 1974, no person shall allow, cause, or permit the emission of nitrogen oxides calculated as nitrogen dioxide in excess of five point five (5.5) pounds, maximum two (2) hour average, per ton of product calculated as one hundred (100) percent nitric acid.

#### 4.4 (136B) Specific Processes.

4.4(1) General. The emission standards specified in this section shall apply, and those specified in section 4.3 shall not apply, to each process of the types listed in the following subsections, except as provided in paragraph a, below.



a. Exception. Whenever the Commission determines that a process complying with the emission standard prescribed in this section is causing or will cause air pollution in a specific area of the state, the specific emission standard may be suspended and compliance with the provisions of section 4.3 may be required in such instance.

4.4(2) Asphalt batching plants. No person shall allow, cause, or permit the operation of an asphalt batching plant in a manner such that the particulate matter discharged to the atmosphere exceeds zero point one five (0.15) grain per standard cubic foot of exhaust gas.

4.4(3) Cement kilns. Cement kilns shall be equipped with air pollution control devices to reduce the particulate matter in the gas discharged to the atmosphere to no more than zero point three (0.3) percent of the particulate matter entering the air pollution control device. Regardless of the degree of efficiency of the air pollution control device, particulate matter discharged from such kilns shall not exceed one-tenth (0.1) grain per standard cubic foot of exhaust gas.

4.4(4) Cupolas for metallurgical melting. The emissions of particulate matter from all new foundry cupolas, and from all existing foundry cupolas with a process weight rate in excess of twenty thousand (20,000) pounds per hour, shall not exceed the amount determined from Table I of these rules and regulations, except as provided in Chapter 5 of these rules and regulations.

a. Existing small cupolas. The emissions of particulate matter from all existing foundry cupolas with a process weight rate less than or equal to twenty thousand (20,000) pounds per hour shall not exceed the amount determined from Table II of these rules and regulations, except as provided in Chapter 5 of these rules and regulations.

TABLE II  
ALLOWABLE EMISSIONS FROM EXISTING SMALL FOUNDRY CUPOLAS

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



4.4(5) Electric furnaces for metallurgical melting. The emissions of particulate matter to the atmosphere from electric furnaces used for metallurgical melting shall not exceed zero point one (0.1) grain per standard cubic foot of exhaust gas.

4.4(6) Feed grinding and mixing plants. No person shall allow, cause, or permit the operation of equipment at a permanent installation for the handling, drying, grinding, mixing, or processing of grain, or blending of grain products, for use as animal food or food supplement such that the particulate matter discharged to the atmosphere exceeds zero point one (0.1) grain per standard cubic foot of exhaust gas.

4.4(7) Grain processing plants. No person shall allow, cause, or permit the operation of equipment for the handling, drying, grinding, mixing, or processing of grain, or blending of grain products, for use as food for human consumption such that the particulate matter discharged to the atmosphere exceeds zero point one (0.1) grain per standard cubic foot of exhaust gas.

4.4(8) Lime kilns. No person shall allow, cause, or permit the operation of a kiln for the processing of limestone such that the particulate matter in the gas discharged to the atmosphere exceeds zero point one (0.1) grain per standard cubic foot of exhaust gas.

4.4(9) Meat smokehouses. No person shall allow, cause, or permit the operation of a meat smokehouse, or a group of meat smokehouses, which consume more than ten (10) pounds of wood, sawdust, or other material per hour such that the particulate matter discharged to the atmosphere exceeds zero point two (0.2) grain per standard cubic foot of exhaust gas.

4.4(10) Phosphate processing plants. No person shall allow, cause, or permit the operation of equipment for the processing of phosphate ore, rock or other phosphatic material including, but not limited to, phosphoric acid in a manner that the unit emissions of fluoride exceed zero point four (0.4) pound of fluoride per ton of phosphorous pentoxide or its equivalent, but not more than one hundred (100) pounds per day.

a. Allowable emissions. The allowable total emission of fluoride shall be calculated by multiplying the unit emission specified above by the expressed design production capacity of the process equipment.

4.4(11) Portland cement concrete batching plants. No person shall allow, cause, or permit the operation of a portland cement concrete batching plant such that the particulate matter discharged to the atmosphere exceeds zero point one (0.1) grain per standard cubic foot of exhaust gas.

4.4(12) Incinerators. No person shall allow, cause, or permit the operation of an incinerator unless provided with appropriate control of emissions of particulate matter, visible air contaminants, and objectionable odors.



a. Particulate matter. No person shall allow, cause, or permit the operation of an incinerator with a rated refuse burning capacity of one thousand (1,000) or more pounds per hour in a manner such that the particulate matter discharged into the atmosphere exceeds zero point two (0.2) grain per standard cubic foot of exhaust gas adjusted to twelve (12) percent carbon dioxide.

(1) No person shall cause, allow, or permit the operation of an incinerator with a rated refuse burning capacity of less than one thousand (1,000) pounds per hour in a manner such that the particulate matter discharged to the atmosphere exceeds zero point three five (0.35) grain per standard cubic foot of exhaust gas adjusted to twelve (12) percent carbon dioxide.

b. Visible emissions. No person shall allow, cause, or permit the operation of an incinerator in a manner such that it produces visible air contaminants which have an appearance, density, or shade equal to or darker than Number 2 on the Ringelmann Chart, or forty (40) percent opacity; except that visible air contaminants which have an appearance, density or shade not darker than Number 3 on the Ringelmann Chart, or sixty (60) percent opacity, may be emitted for a period or periods aggregating not more than three (3) minutes in any sixty (60) minute period during an operation breakdown or during the cleaning of air pollution control equipment.

## CHAPTER 5 EXCEPTIONS

### 5.1 (136B) Exceptions due to maintenance or breakdowns.

5.1(1) Maintenance of power or heating plant. When building a new fire, when manually cleaning a fire, or when blowing tubes and flues in a power plant, heating plant, or domestic heating plant, visible air contaminants of an appearance, density, or shade equal to or darker than that designated as Number 2 on the Ringelmann Chart, or forty (40) percent opacity, may be emitted into the atmosphere for a period or periods aggregating not more than six (6) minutes in any sixty (60) minute period.

5.1(2) Cleaning of pollution control equipment. When cleaning pollution control equipment which does not require a shutdown of equipment, particulate matter may be emitted in excess of the limitations specified in Chapter 4 of these rules and regulations for a period or periods aggregating not more than six (6) minutes in any sixty (60) minute period.

5.1(3) Repair or maintenance. Abnormal conditions, breakdown, or emergency maintenance of pollution control equipment or related operating equipment, which causes emissions in excess of the limitations specified in Chapter 4 of these rules and regulations shall not be deemed violations provided that the provisions specified in paragraphs 5.1(3)a and 5.1(3)b, below are followed.

a. Report of conditions. The person responsible for the equipment causing such emissions shall notify the Technical Secretary by the next regular working day of the Department.



b. Action to correct condition. The person responsible for such equipment causing such emissions shall, with all practicable speed, initiate and complete appropriate reasonable action 1) to correct the conditions causing emissions to exceed said limits, 2) to reduce the frequency of occurrence of such conditions, 3) to minimize the amount by which said limits are exceeded, and 4) to reduce the length of time for which said limits are exceeded, and shall submit to the Technical Secretary, at his request, a full report of such occurrence, including a statement of all known causes, and of the scheduling and the nature of the actions to be taken pursuant to these rules and regulations.

CHAPTER 6  
CIRCUMVENTION OF RULES AND REGULATIONS

6.1 (136B) Circumvention of rules and regulations.

6.1(1) Circumvention prohibited. No person shall build, erect, install, or use any article, machine, equipment, or other contrivance which, without resulting in a reduction in the total amount of air contaminants released to the atmosphere, reduces or conceals an emission which would otherwise constitute violation of these rules and regulations.

CHAPTER 7  
MEASUREMENT OF EMISSIONS

7.1 (136B) Testing and sampling of new and existing equipment.

7.1(1) Tests by owner. The owner of the new equipment, or his authorized agent, shall notify the Technical Secretary in writing, not less than ten (10) days before a test is to be made of an installation. Such notice shall include the time, the place, and the name of the person who will conduct the tests to determine if such equipment is meeting the applicable emission standards specified in Chapter 4 of these rules and regulations. A representative of the Department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the Technical Secretary.

7.1(2) Tests by Department. Representatives of the Department may conduct separate and additional air contaminant emission tests of an installation on behalf of the State and at the expense of the State. Sampling holes, safe scaffolding, and pertinent allied facilities, but not instruments or sensing devices, as needed shall be requested in writing by the Technical Secretary, and shall be provided by and at the expense of the owner of the installation at such points as specified in the request. The owner shall provide a suitable power source to the point or points of testing so that sampling instruments can be operated as required. Analytical results shall be furnished to the owner.

7.1(3) Methods and procedures. Stack sampling and analytical determinations to evaluate compliance with these rules and regulations shall be made in accordance with methods and procedures acceptable to the Commission.



CHAPTER 8  
PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

8.1 (136B) General.

8.1(1) Purpose. The provisions of this chapter are designed to prevent the excessive buildup of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

8.2 (136B) Episode Criteria.

8.2(1) Evaluation. Conditions justifying the proclamation of an air pollution alert, air pollution warning, or air pollution emergency shall be deemed to exist whenever the Commission, its Technical Secretary, or the Commissioner determines that the meteorological conditions are such that the accumulation of air contaminants in any place is reaching, or has reached, levels which could, if sustained or exceeded, lead to a substantial threat to the health of persons.

a. Air pollution forecast. Initial consideration of air pollution episode activities will be activated by receipt from the National Weather Service of an air pollution forecast. Receipt of such a forecast shall be the basis for activities such as, but not limited to, increased monitoring of air contaminants in the area involved.

8.2(2) Declaration. In making determinations for the declaration of an air pollution episode condition, the Commission, its Technical Secretary, or the Commissioner will be guided by the criteria stated in the following paragraphs.

a. Air pollution alert. An alert will be declared when any one of the following levels is reached at any monitoring site, and when meteorological conditions are such that the contaminant concentrations can be expected to remain at those levels for twelve (12) or more hours, or increase, unless control actions are taken.

(1) Sulfur dioxide - 800 micrograms per cubic meter (0.3 ppm), 24-hour average.

(2) Particulate matter - 3.0 COH or 375 micrograms per cubic meter, 24-hour average.

(3) Sulfur dioxide and particulate matter combined - product of ppm sulfur dioxide (24-hour average) and COH equal to 0.2, or product of micrograms sulfur dioxide per cubic meter (24-hour average) and micrograms particulate matter per cubic meter (24-hour average) equal to 65,000.

(4) Carbon monoxide - 17 milligrams per cubic meter (15 ppm), 8-hour average.



(5) Oxidants (ozone) - 200 micrograms per cubic meter (0.1 ppm), 1-hour average.

(6) Nitrogen dioxide - 1,130 micrograms per cubic meter (0.6 ppm) 1-hour average, or 282 micrograms per cubic meter (0.15 ppm), 24-hour average.

b. Air pollution warning. A warning will be declared when any one of the following levels is reached at any monitoring site and when meteorological conditions are such that the contaminant concentrations can be expected to remain at those levels for twelve (12) or more hours, or increase, unless control actions are taken.

(1) Sulfur dioxide - 1,600 micrograms per cubic meter (0.6 ppm), 24-hour average.

(2) Particulate matter - 5.0 COH or 625 micrograms per cubic meter, 24-hour average.

(3) Sulfur dioxide and particulate matter combined - product of ppm sulfur dioxide (24-hour average) and COH equal to 0.8, or product of micrograms sulfur dioxide per cubic meter (24-hour average) and micrograms particulate matter per cubic meter (24-hour average) equal to 261,000.

(4) Carbon monoxide - 34 milligrams per cubic meter (30 ppm), 8-hour average.

(5) Oxidants (ozone) - 800 micrograms per cubic meter (0.4 ppm), 1-hour average.

(6) Nitrogen dioxide - 2,260 micrograms per cubic meter (1.2 ppm), 1-hour average, or 565 micrograms per cubic meter (0.3 ppm), 24-hour average.

c. Air pollution emergency. An emergency will be declared when any one of the following levels is reached at any monitoring site, and when meteorological conditions are such that this condition can be expected to continue for twelve (12) or more hours.

(1) Sulfur dioxide - 2,100 micrograms per cubic meter (0.8 ppm), 24-hour average.

(2) Particulate matter - 7.0 COH or 875 micrograms per cubic meter, 24-hour average.

(3) Sulfur dioxide and particulate matter combined - product of ppm sulfur dioxide (24-hour average) and COH equal to 1.2, or product of micrograms sulfur dioxide per cubic meter (24-hour average) and micrograms particulate matter per cubic meter (24-hour average) equal to 393,000.

(4) Carbon monoxide - 46 milligrams per cubic meter (40 ppm), 8-hour average.

(5) Oxidants (ozone) - 1,200 micrograms per cubic meter (0.6 ppm), 1-hour average.



(6) Nitrogen dioxide - 3,000 micrograms per cubic meter (1.6 ppm), 1-hour average, or 750 micrograms per cubic meter (0.4 ppm), 24-hour average.

d. Termination. Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. As meteorological factors and air contaminants change, an appropriate change in episode level will be declared.

### 8.3 (136B) Preplanned abatement strategies.

8.3(1) Planned strategies. Standby plans shall be designed to reduce or to eliminate emissions of air contaminants in accordance with the objectives set forth in Tables III - V, which are made a part of this chapter.

a. Plan preparation. Any person responsible for the operation of a source of air contaminants as set forth in Tables III - V shall prepare standby plans for reducing the emission of air contaminants, which shall be implemented upon the declaration of an air pollution episode and continued for the duration of the declared episode.

(1) Any person responsible for the operation of a source of air contaminants not set forth under this paragraph shall, when requested by the Technical Secretary in writing, prepare standby plans for reducing the emission of such air contaminant or contaminants during periods of an air pollution episode, as specified in this chapter.

b. Plan content. Standby plans as required under this subsection shall be in writing. Each standby plan shall identify the sources of air contaminants, the approximate amount of reduction of contaminants, and a brief description of the manner in which the reduction will be achieved during an air pollution alert, air pollution warning, or air pollution emergency, as specified in this chapter.

c. Review of plans. Standby plans as required by this subsection shall be submitted to the Technical Secretary on or before January 1, 1973. Each standby plan shall be subject to review. If, in the opinion of the Commission, a standby plan does not provide for adequate reduction of emissions, the Commission may disapprove such plan, state the reasons for disapproval, and order the preparation of an amended standby plan within a time period specified in the order.

d. Availability. During a declared air pollution episode, standby plans as required by this subsection shall be made available on the premises to any person authorized to enforce applicable rules and regulations.

### 8.4 (136B) Actions during episodes.

8.4(1) Emission reduction activities. Any person responsible for the operation of a source of air contaminants as set forth in Tables III - V, herein, which is located within the area involved, shall follow the actions specified below during periods of an air pollution alert, air pollution warning, or air pollution emergency as may be declared.



a. Air pollution alert. When an air pollution alert has been declared, all persons in the area involved responsible for the operation of a source of air contaminants as set forth in Table III, herein, shall take all air pollution alert actions as required for such sources of air contaminants, and persons responsible for the operation of specific sources set forth in Table III, herein, shall put into effect the pre-planned abatement strategy for an air pollution alert.

b. Air pollution warning. When an air pollution warning has been declared, all persons in the area involved responsible for the operation of a source of air contaminants as set forth in Table IV, herein, shall take all air pollution warning actions as required for such sources of air contaminants, and persons responsible for the operation of specific sources set forth in Table IV, herein, shall put into effect the pre-planned abatement strategy for an air pollution warning.

c. Air pollution emergency. When an air pollution emergency has been declared, all persons in the area involved responsible for the operation of a source of air contaminants as set forth in Table V, herein, shall take all air pollution emergency actions as required for such sources of air contaminants, and persons responsible for the operation of specific sources set forth in Table V, herein, shall put into effect the pre-planned abatement strategy for an air pollution emergency.

d. Special conditions. When the Technical Secretary determines that a specified episode level has been reached at one or more monitoring sites solely because of emissions from a limited number of sources, he shall specify the persons responsible for such sources that the pre-planned abatement strategy of Tables III, IV, and V, or the standby plans, are required insofar as they apply to such sources, and such actions shall be put into effect until notified that the criteria of the specified level are no longer met.



TABLE III  
ABATEMENT STRATEGIES EMISSION REDUCTION ACTIONS

ALERT LEVEL

General

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between 12:00 noon and 4:00 P.M.
3. Persons operating fuel burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 noon and 4:00 P.M.
4. Persons operating motor vehicles should eliminate all unnecessary operations.

Source Curtailment

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this alert level.

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Source of Air Pollution	Control Actions
1. Coal or oil-fired electric power generating facilities	<ol style="list-style-type: none"><li><u>a.</u> Substantial reduction by utilization of fuels having low ash and sulfur content.</li><li><u>b.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing or soot blowing.</li><li><u>c.</u> Substantial reduction by diverting electric power generation to facilities outside of alert level.</li></ol>
2. Coal and oil-fired process steam generating facilities	<ol style="list-style-type: none"><li><u>a.</u> Substantial reduction by utilization of fuels having low ash and sulfur content.</li><li><u>b.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</li><li><u>c.</u> Substantial reduction of steam load demands consistent with continuing plant operations.</li></ol>
3. Manufacturing industries of the following classifications:	<ol style="list-style-type: none"><li><u>a.</u> Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing or deferring production and all operation.</li></ol>



TABLE III (Continued)  
 ABATEMENT STRATEGIES EMISSION REDUCTION ACTIONS

ALERT LEVEL

Source Curtailment (Continued)

Primary Metals Industry Petroleum Refining Operations Chemical Industries Mineral Processing Industries Paper and Allied Products Grain Industry	<u>b.</u> Maximum reduction by deferring trade waste disposal operations which emit solid particles, gas vapors, or malodorous substances. <u>c.</u> Maximum reduction of heat load demands for processing. <u>d.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.
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TABLE IV  
 ABATEMENT STRATEGIES EMISSION REDUCTION ACTIONS

WARNING LEVEL

General

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.
3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 noon and 4:00 P.M.
4. Persons operating motor vehicles must reduce operations by the use of car pools and increased use of public transportation and elimination of unnecessary operation.

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this warning level.

Source of Air Pollution	Control Actions
1. Coal or oil-fired electric power generating facilities	<u>a.</u> Maximum reduction by utilization of fuels having lowest ash and sulfur content. <u>b.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.



TABLE IV (Continued)  
ABATEMENT STRATEGIES EMISSION REDUCTION ACTIONS

WARNING LEVEL

Source Curtailment (Continued)

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- |   |  |
|---|--|
|   | <p><u>c.</u> Maximum reduction by diverting electric power generation to facilities outside of warning area.</p>   |
| <p>2. Oil and oil-fired process steam generating facilities</p>   | <p><u>a.</u> Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.</p> <p><u>b.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</p> <p><u>c.</u> Making ready for use a plan of action to be taken if an emergency develops.</p>  |
| <p>3. Manufacturing industries which require considerable lead time for shut-down including the following classifications:</p> <p>Petroleum Refining<br/>Chemical Industries<br/>Primary Metals Industries<br/>Glass Industries<br/>Paper and Allied Products</p> | <p><u>a.</u> Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operation.</p> <p><u>b.</u> Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or malodorous substances.</p> <p><u>c.</u> Maximum reduction of heat load demands for processing.</p> <p><u>d.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</p>  |
| <p>4. Manufacturing industries which require relatively short lead times for shut-down including the following classifications:</p> <p>Primary Metals Industries<br/>Chemical Industries<br/>Mineral Processing Industries<br/>Grain Industry</p>                 | <p><u>a.</u> Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring, production and allied operations to the extent possible without causing injury to persons or damage to equipment.</p> <p><u>b.</u> Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.</p> <p><u>c.</u> Maximum reduction of heat load demands for processing.</p> <p><u>d.</u> Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</p> |
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TABLE V  
ABATEMENT STRATEGIES EMISSION REDUCTION REDUCTION ACTIONS

EMERGENCY LEVEL

General

1. There shall be no open burning by any person of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.
3. All places of employment described below shall immediately cease operations:
  - a. Mining and quarrying of nonmetallic minerals.
  - b. All construction work except that which must proceed to avoid emergent physical harm.
  - c. All manufacturing establishments except those required to have in force an air pollution emergency plan.
  - d. All wholesale trade establishments; i.e., places of business primarily engaged in selling merchandise to retailers; or industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies, except those engaged in the distribution of drugs, surgical supplies and food.
  - e. All offices of local, county, and State government including authorities, joint meetings, and other public bodies excepting such agencies which are determined by the chief administrative officer of local, county, or State government, authorities, joint meetings, and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.
  - f. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.
  - g. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, real estate offices.
  - h. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.
  - i. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting, photocopying, mailing, mailing list and stenographic services; equipment rental services, commercial testing laboratories.
  - j. Automobile repair, automobile services, garages.
  - k. Establishments rendering amusement and recreational services including motion picture theaters.
  - l. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.
4. All commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of air contaminants from their operation by ceasing, curtailing, or postponing operations which emit air pollutants to the extent possible without causing injury to persons or damage to equipment.
5. The use of motor vehicles is prohibited except in emergencies with the approval of local or State police.



TABLE V (Continued)  
 ABATEMENT STRATEGIES EMISSION REDUCTION ACTIONS

EMERGENCY LEVEL

Source Curtailment

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this emergency level.

Source of Air Pollution	Control Actions
1. Coal or oil-fired electric power generating facilities	<ul style="list-style-type: none"> <li>a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.</li> <li>b. Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</li> <li>c. Maximum reduction by diverting electric power generation to facilities outside of emergency area.</li> </ul>
2. Coal and oil-fired process steam generating facilities	<ul style="list-style-type: none"> <li>a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.</li> <li>b. Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</li> <li>c. Taking the action called for in the emergency plan.</li> </ul>
3. Manufacturing industries of the following classifications:  Primary Metals Industries Petroleum Refining Chemical Industries Mineral Processing Industries Grain Industry Paper and Allied Products	<ul style="list-style-type: none"> <li>a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.</li> <li>b. Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.</li> <li>c. Maximum reduction of heat load demands for processing.</li> <li>d. Maximum utilization of mid-day (12:00 noon to 4:00 P.M.) atmospheric turbulence for boiler lancing and soot blowing.</li> </ul>



CHAPTER 9  
CERTIFICATE OF ACCEPTANCE

9.1 (136B) General.

9.1(1) Purpose. Political subdivisions shall meet the conditions specified in this chapter if they intend to secure acceptance of the local air pollution control program and to obtain a Certificate of Acceptance from the Commission, as provided in Section 136B.15, Code of Iowa, 1971.

9.1(2) Limitation. When a Certificate of Acceptance is issued to a political subdivision, the Commission retains authority to take emergency action as provided in paragraph five (5) of Section 136B.9, Code of Iowa, 1971.

9.2 (136B) Certificate of Acceptance.

9.2(1) Application for Certificate. The governing body of a political subdivision may make application for a Certificate of Acceptance.

a. Forms. Each application for a Certificate of Acceptance shall be submitted to the Technical Secretary on the form "Application for a Certificate of Acceptance of Local Air Pollution Control Program". Application forms will be available at the Department.

9.2(2) Processing of applications. The Technical Secretary shall make an investigation of the program covered by an application for a Certificate of Acceptance to evaluate conformance with applicable provisions of Section 136B.15, Code of Iowa, 1971, as soon as practicable.

a. Granting of Certificate. A Certificate of Acceptance may be granted by the Commission upon receipt of an affirmative recommendation from the Technical Secretary, or upon favorable action following a hearing on the application.

b. Review of program. When a Certificate of Acceptance has been granted for a local air pollution control program, the Commission shall provide for a review of the program activities at such intervals as they may prescribe, for evaluation of the continuation of the Certificate. Following such review, the Commission may continue the Certificate in effect, or suspend the Certificate.

(1) Suspension of Certificate. If the Commission determines at any time that a local air pollution control program is being conducted in a manner which is not consistent with the factors described herein, a notice to the political subdivision shall be provided setting forth the deviations from the standards prescribed herein. Such notice shall include a listing of the corrective measures that are to be completed within a specified period of time. If the Commission finds, after such time period, that the specified corrective action has not been completed, the Commission shall suspend the Certificate of Acceptance, and resume administration of the regulatory provisions of the statute in the political subdivision. Suspension of a Certificate shall be without prejudice to the right of the applicant for requesting a hearing before the Commission.



(2) Reinstatement of Certificate. If the Commission shall receive evidence that is deemed to indicate correction of the deviations from the standards, a suspended Certificate of Acceptance shall be reinstated upon the request of the political subdivision involved. Upon reinstatement of a Certificate, the political subdivision shall resume the regulatory functions of the program.

9.3 (136B) Ordinance or Regulations.

9.3(1) Legal aspects. Each local control program considered for a Certificate of Acceptance shall be conducted under an appropriate ordinance or set of regulations.

a. Definitions. The definition of air pollution included in the ordinance or regulations shall be consistent with that specified in paragraph three (3), Section 136B.2, Code of Iowa, 1971.

(1) The other definitions included in the ordinance or regulations shall be consistent with those specified in Chapter 1 of these rules and regulations.

9.3(2) Legal authority. The ordinance or regulations shall provide authority to the local control agency as follows:

a. Scope of control. Authority and responsibility for air pollution control within the entire area included in the jurisdiction involved.

b. Degree of control. Authority to prevent, abate, and control air pollution from all sources within its area of jurisdiction, in accordance with requirements consistent with, or more strict than, the provisions specified in these rules and regulations.

c. Enforcement. Legal authority to enforce its requirements and standards.

d. Inspection and tests. Legal authority to make inspections, perform emission tests, and obtain data, reports, or other information relating to sources of air pollution which may be necessary to prepare air contaminant emission inventories, and to evaluate control measures needed to meet specified goals.

9.3(3) Control of air pollution. The ordinance or regulations shall contain provisions applicable to the control or prohibition of emissions of air contaminants as listed below.

a. Emission control. Requirements specifying maximum concentrations, density, or rates of discharge of emissions of air contaminants from specific sources.

(1) These requirements may be included in the ordinance or regulations, or in standards adopted by the local control agency under the authority granted by such ordinance or regulations.



(2) These requirements shall not establish an emission standard for any specific source that is in excess of the emission standard specified in Chapter 4 of these rules and regulations for that source. However, these requirements may establish an emission standard for any specific source that is more strict than the emission standard specified in Chapter 4 of these rules and regulations for that source.

b. Prohibition of emissions. Provisions prohibiting the installation of equipment having a potential for air pollution without adequate control equipment.

(1) Such restriction may be included in the building code applicable to the jurisdiction covered by the local control agency.

c. Open burning. Provisions prohibiting open burning, including backyard burning, in urban areas within the jurisdiction of the local control agency.

(1) Provisions relating to backyard burning may consist of a program requiring the prohibition of such burning within a reasonable period of time.

(2) Provisions applicable to open burning may include a variance procedure.

d. Requirements for permits. Provisions requiring installation and operating permits for all new or altered equipment capable of emitting air contaminants into the atmosphere installed within the jurisdiction of the local control agency.

9.3(4) Enforcement. The ordinance or regulations of the local control agency shall include an effective mechanism for enforcing the provisions specified thereunder, as listed below.

a. Procedures. The local control ordinance or regulations shall specify that any violation of its provisions are subject to civil and criminal penalties.

b. Penalties. The penalties specified in such ordinance or regulations shall include fines, injunctive relief, and sealing of equipment found to be not in compliance with applicable provisions of the ordinance or regulations.

(1) Fines consistent with the applicable provisions of Section 136B.16, Code of Iowa, 1971, shall be specified.

c. Variances. A procedure for granting variances, or extensions of time to attain compliance status, providing that the authority to grant such variance or extension of time shall not be allocated to any administrative officer of the local control agency.

(1) The local control agency shall maintain on file a record of the names, addresses, sources of emissions, types of emissions, rates of emissions, reason for granting, conditions, and length of time specified, relating to all variances or extension of time granted; and shall make such records available to the Commission or the Department upon request.



#### 9.4 (136B) Administrative Organization.

9.4(1) Administrative facilities. Each local control program considered for a Certificate of Acceptance shall have the administrative facilities necessary for effective operation of such program including, but not limited to, those listed below.

a. Agency. Designation of a legally constituted body within the organizational structure of the applicable political subdivision, or combination of political subdivisions, as the administrative authority for the local control program.

b. Procedures. Adoption of definite administrative procedures for developing, promulgating, and enforcing requirements and standards for air pollution control within the jurisdiction of the local control agency.

c. Staff. Employment of a technical and clerical staff deemed adequate to conduct the air pollution control activities included in the local control program.

(1) Key technical staff personnel shall have received training or experience in air quality management program procedures.

(2) At least one member of the technical staff shall be assigned full-time duty in the operation of the local control program.

9.4(2) Financial support. Each local control program considered for a Certificate of Acceptance shall have adequate financial support for the operation of effective program activities.

9.4(3) Physical facilities. Each local control program considered for a Certificate of Acceptance shall have the physical facilities necessary for the operation of effective program activities, including those listed below.

a. Office space. Sufficient office space and equipment to accommodate the members of the technical and clerical staff.

b. Laboratory facilities. The laboratory space and equipment shall be adequate for the effective exercise of the specific functions required in the operation of the local control program.

c. Transportation facilities. These facilities shall include provisions for transportation of personnel to service air monitoring equipment, visits to sources of emissions for investigative purposes, and other appropriate program activities.

#### 9.5 (136B) Program Activities.

9.5(1) Control program. Each local control program considered for a Certificate of Acceptance shall conduct air pollution control activities adequate to provide adequate control of air pollution within the jurisdiction of the local control program, including, but not limited to, those listed below. In conducting these program activities, the local control agency shall make every effort to meet the specified ambient air quality objectives applicable to the State of Iowa.



a. Evaluation of problems. Determination of the actual and potential air pollution problems within the jurisdiction of the local control agency, and comparison of the present air quality in that jurisdiction with the air quality standards and objectives promulgated for this State.

(1) The air quality within the jurisdiction shall be determined by an air monitoring program, using sampling techniques and laboratory determinations compatible with those used in the air pollution control program of this State. The air monitoring program of the local control agency shall give attention to the air contaminants considered to be indices of pollution in this State.

(2) The current emissions of significant air contaminants from sources located within the jurisdiction of the local control agency shall be determined through an emissions inventory. The data collected should be used to determine the levels of air contaminant emissions appropriate to achieve or maintain the levels specified in air quality goals or objectives, and to calculate the reductions in emissions inventory to meet those goals or objectives.

b. Control Activities. Conducting of activities to abate or control emissions of air contaminants from existing equipment or from new or altered equipment located within the jurisdiction of the local control agency.

(1) A program of plant inspections shall be conducted with respect to control of emissions from existing equipment. These activities should include the collection of data related to the types of emissions and the rate of discharge of emissions from each source involved, along with stack sampling when deemed appropriate.

(2) Procedures for plan review and the issuing of permits relating to the installation, or alteration such that the emission of air contaminants is significantly altered, shall be conducted with respect to control of emissions from new or altered sources. These procedures may include provisions for permits relating to the use of the equipment involved.

## CHAPTER 10 MISCELLANEOUS

### 10.1 (136B) Scope.

10.1(1) Conformance. Nothing in these rules and regulations is intended to permit any practice which is in violation of any statute, ordinance, or regulations.

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These rules are intended to implement section 136B.4(3), section 136B.4(5), and section 136B.15 of the Code of Iowa, 1971.

These rules shall become effective June 16, 1972.



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