ORDINANCE NUMBER 12

THE AIR POLLUTION

ORDINANCE

Under authority provided in Minnesota Statutes, Section 145.53, BE IT ORDAINED by the St. Louis County Board of County Commissioners:

ST. LOUIS COUNTY AIR POLLUTION CONTROL ORDINANCE

ORDINANCE NO. 12

PREFACE:

It is hereby declared to be the public policy of the St. Louis County Board of Commissioners to preserve, protect and improved the air resources of St. Louis County, Minnesota, so as to promote health, safety, and welfare; prevent injury to human health, plant and animal life, and property, foster the comfort and convenience of its inhabitants; and, to the greatest degree practicable, facilitate the enjoyment of the natural attractions of St. Louis County.

Under authority provided in Section 145.53, Minnesota Statutes, BE IT ORDAINED by the County Board of St. Louis County, Minnesota, that an ordinance providing for the conservation of the air resources of St. Louis County, Minnesota; the prevention, abatement, and control of air pollution; and for related matters is hereby enacted.

SECTION 1 -- AMBIENT AIR QUALITY STANDARDS

A. The "primary" air quality standards are levels of air pollutants above which, on the basis of present knowledge, health hazards or impairment may be produced. Health hazards include not only production, aggravation, or possible production of disease, but also interference with function. Health impairment includes sensory irritation and impairment of well-being by such phenomena as odor. The "secondary" air quality standards are levels which are desirable to protect the public welfare from any known or anticipated adverse effects, such as injury to agricultural crops and livestock, damage to or deterioration of property, annoyance and nuisance of person, sensory impairment and obstruction, or hazards to air and ground transportation.

B. No person shall emit any pollutant in such an amount or in such a manner as to exceed any ambient air quality standards herein beyond such person's property line, without

respect to whether emission regulation stated in other sections of this ordinance are also being violated.

C. County Ambient Air Quality Standards (a) (b) (c)

Pollutant/Air Contaminant	Concentration	Remarks
1. Hydrogen Sulfide (d) (primary standards)	0.05 ppm by volume (70.0 micrograms per cubic meter)	½ hr. aver not to be exceeded over 2 times per year
	0.03 ppm by volume (42.0 micrograms per cubic meter)	½ hr. aver not to be exceeded over 2 times in any 5 consecutive days
2. Photochemical (e) Oxidants (primary and secondary standards)	0.07 ppm by volume (130 micrograms per cubic meter)	maximum 1 hr. concentration not to be exceeded more than once per year
3. Carbon Monoxide (f) (primary and secondary standards)	9 ppm by volume (10 milligrams per cubic meter)	maximum 8 hr. concentration not to be exceeded more than once per year
	30 ppm by volume (35 milligrams per cubic meter)	maximum 1 hr. concentration not to be exceeded more than once per year
4. Hydrocarbons (g) (primary and secondary standards)	0.24 ppm by volume (160 micrograms per cubic meter)	maximum 3 hr. concentration (6-9 a.m.) not to be exceeded more than once per year, corrected for methane
5. Sulfur Oxides (h) (primary and secondary standards)	0.02 ppm by volume (60 micrograms per cubic meter)	maximum annual arithmetic mean

	0.1 ppm by volume (260 micrograms per cubic meter)	maximum 24 hr. concentration not to be exceeded more than once per year	
	0.25 ppm by volume (655 micrograms per cubic meter)	maximum 3 hr. concentration not to be exceeded more than once per year	
6. Particulate Matter (primary standard)	(i) 75 micrograms per cubic meter	maximum annual geometric mean	
	260 micrograms per cubic meter	maximum 24 hr. concentration not to be exceeded more than once per year	
Particulate Matter (secondary standard)	60 micrograms per cubic meter	maximum annual geometric mean	
	150 micrograms per cubic meter	maximum 24 hr. concentration not to be exceeded more than once per year	
7. Nitrogen Oxides (primary and secondary standards)	(j) 0.05 ppm (100 micrograms per cubic meter	maximum annual arithmetic mean	

Footnotes:

(a) All standards apply throughout St. Louis County, Minnesota

(b) All measurements of ambient air quality are corrected to a reference temperature of 25 degrees C. and a reference pressure of 760 mm of mercury.

(c) All measurements and tests shall be conducted by the methodology referenced herein, or other methodology as the Director shall hereafter approve.

(d) By methylene blue, or other method approved by the Director.

(e) Neutral-buffered one percent potassium iodide colorimetric detection technique corrected for SO2 and NO2 interference, gas phase chemiluminescence, or other method approved by the Director.

(f) Non dispersive infrared spectrometry (N.D.I.R.), or other method approved by the Director.

(g) Flame ionization, or other method approved by the Director.

(h) By pararosaniline, coulometric, or other method approved by the Director.

(i) High volume method, or other method approved by the Director.

(j) Jacobs-Hochheiser, or other method approved by the Director.

SECTION 2 -- DEFINITIONS, PROVISIONS FOR RECREATIONAL FIRES, ACCESS TO PREMISES, VARIANCES, CIRCUMVENTION AND SEVERABILITY

A. "Definitions": As used in these regulations except as otherwise specifically provided or where the context indicates otherwise, the following words shall have the meanings ascribed to them in this regulation:

1. "Criteria": Means technical information to be utilized as decisional guidelines in considering air quality goals, air quality standards and determining air quality alert levels.

2. "Director": Means the Director of the Minnesota Pollution Control Agency.

3. "Existing": A modifier for equipment, machines, devices, articles, contrivances, or installations which are in being at the time these regulations become effective; except that any existing equipment, machine, device, article, contrivance or installation which is altered, repaired or rebuilt at an aggregate cost of 30 percent or more of its replacement cost at the time of such alteration, repair or rebuilding, shall be reclassified as "new", but only if such alteration or repair constitutes an additional or greater source of air pollution.

4. "Garbage": Animal and vegetable matter such as that originating in homes, restaurants, and food service and processing establishments.

5. "Health Officer": The St. Louis County Health Officer or his authorized representative.

6. "Multiple Chamber Incinerator": Any article, machine, equipment, contrivance, structure or part of a structure, used to dispose of combustible refuse by burning, and consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned.

7. "New": A modifier for equipment, machines, devices, articles, contrivances or installations built or installed on or after the effective date of these regulations, and installations existing at said stated time which are later altered, repaired, or rebuilt at a cost of 30 percent or more of replacement cost at the time of such alteration, repair or rebuilding, and constitute an additional or greater source of air pollution.

8. "Opacity": A state which renders material partially or wholly impervious to rays of light and causes obstruction of an observer's view.

9. "Open Burning": Burning any matter whereby the resultant combustion products are emitted directly to the open atmosphere without passing through an adequate stack, duct, or chimney.

10. "Particulate Matter": Material, except uncombined water, which exists at standard conditions in a finely divided form as a liquid or solid.

11. "Person": As defined in Minnesota Statutes 1967, Section 116.06, Subdivision 8.

12. "Processes or Process Equipment": Any action, operation, or treatment embracing chemical, industrial, or manufacturing facilities such as ovens, mixing kettles, heating and reheating furnaces, kilns, stills, dryers, roasters, and equipment used in connection therewith, and all other methods or forms of manufacturing or processing that may emit any air contaminant such as smoke, odor, particulate matter, or gaseous matter.

    A salvage operation is not a process within this definition.

13. "Process Weight": The total weight of all material excluding air, gas and oil used solely as fuel, but including solid fuel used in a potential dust-producing process, which is connected directly or indirectly to dust-collecting or dust-abating equipment or system. The allowable emission rate of

particulate matter by weight (Table 1 of Section 5) or dust concentration (Table 2 of Section 5) is calculated from the material weight (weight rate) introduced into the dust-collecting or dust-abating equipment or system.

14. "Refuse": As defined in Minnesota Pollution Control Agency Solid Waste Regulation SW 1 (12).

15. "Refuse Collection Service": As defined in Minnesota Pollution Control Agency Solid Waste Regulation SW 1 (13).

16. "Residual Fuel Oil": Fuel oil known as Bunker C, PS400 and Number 6 as defined in American Society for Testing and Materials D 396 (1959).

17. "Salvage Operation": Any business, trade, industry, or other activity conducted in whole or in part for the purpose of salvaging or reclaiming metals or chemicals or other products or materials.

18. "Smoke": Small gas-borne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, ash and other combustible material, that form a visible plume in the air.

19. "Solid Waste Management System": As defined in Minnesota Pollution Control Agency Solid Waste Regulation SW 1 (20).

20. "Standard Conditions": A dry gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

21. "Trade Waste": Solid, liquid, or gaseous material resulting from any business, trade or industry activity, construction activity, or any demolition operation including, but not limited to, plastics, cardboard cartons, grease, oil, chemicals and cinders.

22. "Waste Classification": Six classifications of waste as defined by the Incinerator Institute of America and the American Society of Mechanical Engineers.

23. "Source Gas Volume": The volume of gas emanating from a process or other source.

24. "Agency": Minnesota Pollution Control Agency.

B. Recreational Fires Permitted. These regulations shall not

apply to wood-burning fireplaces, nor to fires used solely for the preparation of food by barbecuing.

C. Access to Premises. Whenever it shall be necessary for the purposes of these regulations, the Health Officer may enter upon any property, public or private, for the purpose of obtaining information or conducting surveys or investigations.

D. Variance. Whereupon written application of the responsible person or persons the St. Louis County Board of Health finds that by reason of exceptional circumstances strict conformity with any provisions of the emission standards contained herein would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the St. Louis County Board of Health may permit a variance from these emission standards upon such conditions and within such time limitations as it may prescribe for prevention, control or abatement of air pollution in harmony with the intent of the State and any applicable Federal laws.

E. Circumvention. No person shall cause or permit the installation or use of any device of any means which, without resulting in reduction in the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation.

F. Severability. If any provision of any section or the application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other provisions or application of any other part of such section or any other section which can be given effect without the invalid provision or application, and to this end the provisions of all sections and the various applications thereof are declared to be severable.

SECTION 3 -- PERMITS, EMISSION SOURCE MONITORING, MEASUREMENT OF AIR CONTAMINANTS, ANTI-DEGRADATION

A. Installation and Operating Permits for Stationary Sources, Fuel-Burning Equipment, Refuse-Burning Equipment and Control Equipment.

1. Installation Permit

a. No person shall plan or construct any installation, or reconstruction, or alteration of any stationary process, fuel-burning equipment, refuse-burning equipment, or control equipment therefor without obtaining an installation permit in accordance with Minnesota Laws

1971, Chapter 904.

b. Review of plans. A person planning to construct, install, reconstruct or alter any stationary process, fuel-burning, refuse-burning, or control equipment therefore which may be a source of air pollution shall no later than 45 days prior to the initiation of any construction, installation or alteration submit plans and specifications of the process, fuel-burning, refuse-burning or control equipment and structures of buildings used in connection therewith.

c. Information required. Plans and specifications shall include the following information:

(1) Expected composition of the effluent stream, both before and after the installation of an air-cleaning device, including emission rate, concentration, volume, and temperature;

(2) Expected physical characteristics of particulates;

(3) Type and rated performance of cleaning device, if any;

(4) Location and elevation of the emission point and other factors relating to dispersion and diffusion of the contaminant in the outer air, and the relation of the emission point to nearby structures, window openings, and other information necessary to appraise the possible effects of the effluent;

(5) Any other reasonable and pertinent information that may be required by the Director.

2. Operating Permit

a. No person shall operate any stationary process, fuel-burning equipment, refuse-burning equipment, or control equipment therefor without obtaining an operating permit in accordance with the provisions of Minnesota Laws 1971, Chapter 904.

b. A person operating an existing installation which is a source of air contaminants and air pollution shall apply for an operating permit. New operating permits are not required for persons operating emission sources where an operating permit has been issued before January

31, 1972, unless said operating is in violation of Agency air quality rules, regulations and standards.

c. A person operating a new installation, reconstruction, or alteration for which an installation permit is required shall apply for an operating permit 90 days following the commencement of operation of the new installation, reconstruction or alteration.

d. Information required. Plans and specifications shall include the following information:

(1) Expected composition of the effluent stream, both before and after the installation of an air-cleaning device, including emission rate, concentration, volume and temperature.

(2) Expected physical characteristics of particulates;

(3) Type of rated performance of cleaning device, if any;

(4) Location and elevation of the emission point and other factors relating to dispersion and diffusion of the contaminant in the outer air, and the relation of the emission point to nearby structures, window openings, and other information necessary to appraise the possible effects of the effluent;

(5) Any other reasonable and pertinent information that may be required by the Director.

3. Exemptions

The following installations are exempted from the requirements of subparagraph 1 and 2 of this section:

a. All fuel-burning installations of less than 1,000,00 BTU per hour input;

b. All fuel-burning installations of less than 10,000,000 BTU per hour input burning only natural gas, liquified petroleum gas, No. 1 and No. 2 fuel oil;

c. Comfort air conditioning or comfort ventilating

systems not designed to remove air contaminants generated by or released from specific units or equipment;

d. Incinerators of less than 100 pounds per hour burning capacity.

4. Shutdown or Breakdown of Control Equipment.

In the case of an intended shutdown of any control equipment, the operator shall notify the Health Officer at least 24 hours in advance of the shutdown. In the case of breakdown, the operator shall notify the Health Officer immediately, except that a temporary breakdown of less than one hour duration need not be reported. In the case of either a shutdown or reportable breakdown, the operator shall also, at the time of notification or as soon thereafter as possible, inform the Health Officer of the cause, and the estimated duration of the shutdown or breakdown. The operator shall undertake all reasonable efforts to correct the cause and restore the equipment to full operation. No equipment, installation or facility shall be operated which has an unreasonable breakdown frequency as determined by the Health Officer. In any event, no operation that may cause an immediate public health hazard shall be deemed an exception from this regulation.

B. Emission Source Monitoring

1. All persons responsible for the emission of air contaminants may be required to establish an emission source monitoring system, upon order of the Health Officer, when in his judgment other methods of measurement of calculation do not provide adequate information on the level or variation of emissions to assure compliance with the regulations. The monitoring system may include the installation and operation of such monitoring instruments as are available and reasonably necessary to assure the accuracy of the monitoring. All emission source monitoring shall be accomplished by the following listed methodology and testing or other methodology and testing as the Health Officer shall require: e.g., as to visible emissions, as photo-electric or other type of visible emission detector and records; e.g., as to hydrocarbons, sulfur dioxide, carbon monoxide and nitrogen oxides, instruments designed for continuous monitoring and recording; e.g., as to particulate emissions, annually, by ASME--PTC 27. Results of such tests shall be reported to the Health Officer within 45 days.

2. The accuracy of all such instruments and the adequacy of the monitoring system shall be demonstrated to the satisfaction of the Health Officer prior to the issuance of an installation permit, and at any other time that the Health Officer may request.

3. All information obtained as a result of such monitoring shall be furnished to the Health Officer at such time and in such form as he may specify. The Health Officer shall publish all such information indicating emissions in excess of those permitted by law. Any emissions data published by the Health Officer shall be presented in such a manner as to show the relationship between actual and allowable emissions. Within ten days of receipt of a written request from any person, the Health Officer shall provide the available recorded hourly emission or other available monitoring data from any source for a period not exceeding four consecutive days.

4. In the case of an intended shutdown of any monitoring instruments, the operator shall notify the Health Officer at least 24 hours in advance of the shutdown. In the case of a breakdown, the operator shall notify the Health Officer immediately, except that a temporary breakdown of less than 60 minutes duration need not be reported. In the event of either a shutdown or reportable breakdown, the operator shall also, at the time of notification or as soon thereafter as possible, inform the Health Officer of the cause, and the estimated duration of the shutdown or breakdown. The operator shall undertake all reasonable efforts to correct the cause and restore the monitoring instruments to full operation.

5. An exemption from the requirements of this paragraph B shall be granted (1) as to any source utilizing control equipment of fuel of such design or nature as to assure compliance with emissions regulations beyond reasonable doubt, and (2) as to any source that does not emit particulates, sulfur oxides or nitrogen oxides in excess of 25 tons per year.

C. Measurement of Air Contaminants Emissions

1. Responsible Persons to Have Tests Made

Upon order of the Health Officer, all persons responsible for emission of air contaminants shall make or have made tests to determine the characteristics and amount of emission of air contaminants from any source. The Health Officer may specify testing methods to be used in accordance with good professional practice and may observe the testing. All tests shall be conducted by reputable, qualified personnel. The Health Officer shall be given two copies of the test methodology and results in writing and signed by the person responsible for the tests.

2. The Health Officer May Make Tests

Upon order of the Health Officer, the persons

responsible for an air contaminant source shall provide necessary holes in stacks or ducts and such safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of emission of air contaminants, and the Health Officer or his agents may conduct tests of emissions from such source.

3. All owners or operators of stationary sources of emissions which emit more than 25 tons per year of particulates, sulfur oxides, nitrogen oxides, carbon monoxide, hydrocarbons or any combination thereof shall submit on or before January 30 of each year an emission inventory report covering the previous calendar year.

D. Anti-degradation

Notwithstanding any other provisions of these rules and regulations:

1. An installation permit or an operating permit shall not be issued if the planned construction, installation, reconstruction, alteration or operation would result in emissions of air contaminants causing the violation of the ambient air quality standards.

2. An installation permit shall not be issued to any installation or industry which has a combined air contaminant or pollutant emission in excess of one hundred tons per year unless such installation or industry provides the Agency with an emission analysis calculated upon the data complied in accordance with instructions provided by the Agency; and that such installations and industries plan, construct, and operate each air contaminant source so as to meet:

   a. such federal new source standards as may be applicable, and

   b. such new source standards as may have been or may be adopted by the Minnesota Pollution Control Agency for the area where the installation or industry is proposed to be located.

3. An installation permit shall not be issued to any planned installation or industry referred to in Section D2 without the holding of public hearings concerning the location and construction of such installation and industry. The Agency shall request the Arrowhead Regional Development Commission in the case of site location in the Duluth-Superior Air quality Control Region, and the State Planning Agency notwithstanding the site location, to submit

recommendations as to whether the site location of the planned installation or industry is in accordance with the long-ranged development plans and objectives of the respective agency or commission.

SECTION 4 -- EMISSIONS LIMITATIONS FROM FUEL-BURNING EQUIPMENT USED FOR INDIRECT HEATING

A. General Provisions

1. This regulation applies to fuel-burning installation utilized for the primary purpose of producing steam, hot water, hot air or other indirect heating of liquids, gases, or solids where the products of combustion do not have direct contact with process materials. Fuel includes coal, coke, lignite, coke breeze, fuel oil, and wood, but does not include refuse. When any products or by-products or a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

2. Heat content of coal shall be determined according to American Society for Testing and Materials method D271-64 Laboratory Sampling and Analysis of Coal and Coke, or method D-2015-62T Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, which publications are incorporated herein by reference, or such other testing method as the Director may approve.

3. As used herein "heat input" shall be the aggregate heat content of all fuels whose combustion products pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel-burning units at an installation or on a premise shall determine the maximum allowable amount of particulate matter emission.

4. Particulate matter emission shall be measured according to the American Society of Mechanical Engineers Power Test Code--PTC--27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream," which publication is incorporated herein by reference, or other approved method conducted in accordance with food professional practice, or such other testing method as the Director may approve.

B. Air Contaminants

1. Sulfur Oxides Emissions

a. No fuel-burning installation of greater than 250 million BTU shall burn a fuel or blend of fuels whose sulfur content is greater than the following limitations:

Fossil fuel other than oil

(1) after June 1, 1972, 2.5% sulfur by weight

(2) after June 1, 1974, 2.0% sulfur by weight

Oil

(1) after June 1, 1974, 2.0% sulfur by weight

b. Any person who supplies fuels containing more than 0.5% sulfur by weight directly to a user for burning shall keep records as prescribed by the Director the percent sulfur by weight contained in such fuel by date delivered, quantity, and to whom sold. These records shall be available for review by the Agency.

c. Exceptions

The provision of Section B1a shall not apply under the following conditions:

(1) A variance has been granted by the Agency.

(2) A person meets the following limitation:

(a) after June 1, 1973, 2.00 lb. SOx per million BTU actual heat input

(b) after June 1, 1974, 1.75 lb. SOx per million BTU actual heat input

2. Particulate Emissions

a. Provision for New Installations and Installations within the City of Duluth.

(1) Regardless of stack number or height, the maximum allowable emission for any stack, plant or installation shall be 0.4 pound of particulates per million BTU input.

b. Provision for Existing Installations and Installations Outside the City of Duluth.

(1) Regardless of stack number or height, the maximum allowable emission for any stack, plan or installation shall be 0.6 pound of particulates per million BTU input.

c. Emissions of particulate matter from the combustion of fuel for indirect heating shall be limited by the provisions of the American Society of Mechanical Engineers Standard No. APS-1 dated June 15, 1966, "Recommended Guide for the Control of Dust Emission-Combustion for Indirect Heat Exchangers." Figure 2 in such standard as amended shall be used to estimate allowable emissions as amended therein from a plant with a single stack. The appropriate correction factor shall be applied to multiple stack plants or installations.

C. Smoke Indicators

It is recommended plans or installations burning solid fuel or liquid fuels of Grades 5 or 6 (PS No. 300 or PS No. 400) and having more than 1,000,000 BTU input capacity be equipped with smoke indicators, mirrors, or similar approved devices to enable the fireman to observe the breaching or the top of the stack or stacks from the boiler room at all times, unless the top of the stack is readily visible to the fireman from the boiler room without the use of such devices. In plants where a fireman is not in constant attendance in the boiler, and when the boilers fired at one time aggregate more than 1,000 square feet of heating surface the smoke indicators should be capable of sounding an alarm or flashing a signal to attract the attention of the fireman. Any existing plant or installation which emits smoke of a density greater than permitted by appropriate regulation shall install such indicating devices.

SECTION 5 -- RESTRICTION OF EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

A. General Provisions

1. This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating where the products of combustion do not directly contact process materials, except refuse burning and process burning of salvageable material.

2. "Process weight" shall have the meaning ascribed to it in Section 2.

Process weight rate for continuous or long-run steady-state sources shall be the total process weight for the entire period of continuous operation or a typical portion thereof, divided by the number of hours or such period or portion thereof. Process weight rate for cyclical or batch source shall be the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

Where the nature of any process or operation or the design of any equipment admits more than one interpretation of this section, the interpretation resulting in the minimum allowable emission value shall apply.

3. Emission tests for determination of compliance with this regulation shall follow the standards in American Society of Mechanical Engineers Power Test Code - PTC - 27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream" or other approved method.

B. Emission Limitations

1. Except as provided in Section 5B2 below, no person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 1 for the allocated process weight.

2. The limitations established by Section 5B1 shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in Table 2 for such volume. The burden of showing the source gas volume, including all factors and methods determining such volume, shall be on the person seeking to come within the provisions of this section.

3. No person shall cause, suffer, allow, or permit the emission of particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases. Provisions of this subsection shall not apply to existing grey iron jobbing cupolas. For purposes of this regulation, a jobbing cupola is defined as a cupola which has a single melting cycle no more than ten hours in any consecutive 24 hours and no more than 50 hours in any consecutive seven days.

   a. All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to removed 85 percent by weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic

foot of discharge gas, whichever is more stringent.

b. All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200? Fahrenheit for a period of not less than 0.3 seconds.

4. Exceptions. A temporary operational breakdown or cleaning of air pollution control equipment for any process is permitted as an exception to the provisions of Section 5 provided the owner or operator immediately advises the Health Officer of the circumstances and outlines an acceptable corrective program. In any event, no operation that may cause an immediate public health hazard can be deemed an exception from this regulation.

5. Any existing emission source which has particulate collection equipment with a collection efficiency of 99 percent by weight or any new emission source which is installed with particulate collection equipment of 99.7 percent efficiency by weight shall be considered as meeting the provisions of this regulation.

6. Any emission source located outside of the corporate limits of any city which has particulate collection equipment with a collection efficiency of not less than 85 percent by weight, and is located not less than one-fourth mile from any residence or public roadway, and the operation thereof does not create a suspended particulate concentration in the ambient air beyond the property lines of the source of emission which is above the ambient air quality standards, shall be considered as meeting the provisions of this regulation.

7. TABLE I

Process Weight Rate	Rate of Emission		Process Weight Rate	Rate of Emission	
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	15,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.00	25.2
800	0.40	2.22	40,000	20.00	30.5
1,000	0.50	2.58	50,000	25.00	35.4
1,500	0.75	3.38	60,000	30.00	40.0

2,000	1.00	4.10	70,000	35.00	41.3
2,500	1.25	4.76	80,000	40.00	42.5
3,000	1.50	5.38	90,000	45.00	43.6
3,500	1.75	5.96	100,000	50.00	44.6
4,000	2.00	6.52	120,000	60.00	46.3
5,000	2.50	7.58	140,000	70.00	47.8
6,000	3.00	8.56	160,000	80.00	49.0
7,000	3.50	9.49	200,000	100.00	51.2
8,000	4.00	10.4	1,000,000	500.00	69.0
9,000	4.50	11.2	2,000,000	1,000.00	77.6
10,000	5.00	12.0	6,000,000	3,000.00	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation E=4.10 PO.67, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$$E=55.0\ PO.11-40$$

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

8. TABLE 2

Source Gas Volume, SCFMa	Concentration GR/SCFb	Source Gas Volume, SCFMa	Concentration GR/SCFb
7,000 or less	0.100	140,000	0.038
8,000	0.096	160,000	0.036
9,000	0.092	180,000	0.035
10,000	0.089	200,000	0.034
20,000	0.071	300,000	0.030
30,000	0.062	400,000	0.027
40,000	0.057	500,000	0.025
50,000	0.053	600,000	0.024
60,000	0.050	800,000	0.021

80,000	0.045	1,000,000 or more	0.020
100,000	0.042		
120,000	0.040		

a Standard cubic feet per minute (see "Definition" 16).
b Grains per standard cubic foot.

SECTION 6 -- PREVENTING PARTICULATE MATTER FROM BECOMING AIR-BORNE

A. No person shall cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amount or particulate matter to become air-borne.

B. No person shall cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming air-borne. The Health Officer may require such reasonable measures as may be necessary to prevent particulate matter from becoming air-borne including, but not limited to, paving or frequent clearing of roads, driveways and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.

SECTION 7 -- INCINERATORS

A. General Provisions

1. This regulation applies to any incinerator used to dispose of refuse by burning or the processing of salvageable material by burning. Notwithstanding definitions in other regulations, as used in this regulation the word "refuse" includes garbage, rubbish, trade wastes, leaves, salvageable material and agricultural wastes. The word "incinerator," as used in this regulation, includes incinerators and other devices, structures, or contrivances used to burn refuse or to process refuse by burning.

2. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such acceptable other rate as is considered good engineering practice.

3. The amount of particulate matter emitted from any incinerator shall be determined according to the American Society of Mechanical Engineers Power Test Code - PTC - 27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream" or any other method which is consistent with good professional practice. The above publication is hereby made a part of this regulation by reference. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to 12 percent carbon dioxide in the stack gas. The carbon dioxide produced by burning of any liquid or gaseous fuel in the incinerator shall be excluded from the calculation to 12 percent carbon dioxide. Emissions shall be measured under maximum operation capacity or at any other burning rate wherein emission of particulate matter is greater.

B. Restriction of Emissions of Particulate Matter from Incinerators

1. No person shall cause or permit the emission of particulate matter from the stack or chimney of any incinerator in excess of the following:

   a. Incinerators with a maximum refuse-burning capacity of less than 200 pounds per hour, 0.3 grains of particulate matter per standard dry cubic foot of exhaust gas.

   b. Incinerators with a maximum refuse-burning capacity of 200 to 2,000 pounds per hour, 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas.

   c. Incinerators with a maximum refuse-burning capacity in excess of 2,000 pounds per hour. 0.1 grains of particulate matter per standard dry cubic foot of exhaust gas.

2. All new incinerators and all existing incinerators to be modified to meet the requirements of this regulation and which are to burn type 2, 3, 4, 5, or 6 waste as classified by the Incinerator Institute of America must be equipped with auxiliary fuel burners of such capacity and design as to assure a temperature in the secondary combustion chamber of at least 1200? for a sufficient time to prevent objectionable odor emission.

3. No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator. Existing incinerators which are not multiple chamber incinerators may be altered, modified or rebuilt as may be necessary to meet this requirement. The Health Officer may approved any other alteration of modification to an existing incinerator if such be found by him to

be equally effective for the purpose of air pollution control as a modification or alteration which would result in a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the Health Officer may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator is as equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

Existing incinerators burning type 2 and type 3 waste which are not multiple chamber incinerators and do not otherwise meet the requirements of this section shall be modified or rebuilt in compliance with this section. Existing incinerators burning type 4, 5, or 6 waste require the specific approval of the Health Officer. Incinerators handling any garbage and organic waste must have auxiliary fuel burners that maintain a minimum temperature of 1200?F for a minimum of .3 second retention time, or until odor emissions are eliminated.

4. No person shall burn or cause or permit the burning of refuse in any installation which was designed for the sole purpose of burning fuel.

SECTION 8 -- OPEN BURNING RESTRICTIONS

A. Refuse Burning Restrictions

1. No person shall dispose of refuse by open burning, or cause, suffer, allow or permit open burning of refuse.

2. Except as hereafter provided in this paragraph, where any township, without regard to location, has a total population of less than 2,500 persons according to the most recent official state or federal census, finding of the Municipal Commission, persons dwelling within said township may dispose of refuse originating from dwelling units on residential premises within said township by open burning on said residential premises. However, persons dwelling within those portions of such townships having a population density in excess of 100 occupied dwelling units per square mile, as determined by the Health Officer, shall be required to comply with all provisions of this regulation. A dwelling shall be occupied for the purposes of this regulation if it is occupied as either a seasonal or a permanent dwelling.

3. Without regard to location, where any township, having a population in excess of 2,500 persons according to the most recent official state or federal census, finding of the Municipal Commission or any city, village, or borough, without respect to the total population of said city, village, borough, has a population density of less than 100 occupied dwelling units per square mile in a

portion of said city, village, borough or township, as determined by the municipal government with approval of the Health Officer, persons dwelling within said portion may dispose of refuse originating from dwelling units on residential premises by open burning on said residential premises upon application by said city, village, borough or township and with the approval of the Health Officer. Said portions must be in excess of 2 square miles of contiguous area. A dwelling shall be occupied for the purposes of this regulation if it is occupied as either a seasonal or a permanent dwelling.

4. Refuse originating from dwelling units shall include, for the purposes of this section, household rubbish, leaves and other natural matter, not including garbage and other putrescible solid wastes, which emanate from a dwelling unit. Refuse from agricultural operations shall not be disposed of by open burning under this regulation, except as provided in Section 8D5.

B. Prohibitions of Salvage Operations by Open Burning

No person shall conduct, cause or permit the conduct of a salvage operation by open burning.

C. Restriction on Open Burning of Tree Leaves

The open burning of leaves is prohibited effective two months after refuse collection service or a general solid waste management system is available. Until such time, burning of leaves is permitted only in containers meeting fire safety standards.

D. Exceptions. Exceptions herefrom may be allowed upon application and approval by the Health Officer where accompanied by the recommendation of the local fire marshal or other responsible local official having jurisdiction thereof. Such burning shall not be permitted, however, if contrary to other applicable laws, ordinances and regulations. Exemption to conduct open burning under the provisions of this regulation does not excuse a person from the consequences, damages, or injuries which may result therefrom. In areas in which open burning is permitted pursuant to this regulation, persons seeking a permit to conduct open burning under paragraph D may obtain such a permit from a regular forest officer or a town fire warden pursuant to Minnesota Statutes, Section 88.17 and 88.18. The Director shall be notified of the name and address of such designated person before he may perform such duties. Such notification shall be effective for one year from the date of receipt by the Agency. The following are exceptions for which a permit may be obtained:

1. fires purposely set for the instruction and training of public and industrial fire-fighting personnel.

2. fires set for the elimination of a fire hazard which cannot be abated by any other practicable means.

3. Fires purposely set for forest or game management in accordance with practices recommended by the Minnesota Department of Conservation, the Minnesota Department of Agriculture and the United States Forest Service.

4. The burning of hydrocarbons which must be wasted through the use of atmospheric flares.

5. The burning of trees, brush, grass and other vegetable matter in the clearing of land, right-of-way maintenance operations and agricultural crop burning is permitted under the following conditions:

   a. The prevailing winds at the time of burning must be away from any municipality.

   b. The location of burning must not be within 1,000 feet of an occupied residence other than those located on the property on which the burning is conducted.

   c. Oils, rubber or other similar materials which produce unreasonable amounts of air contaminants may not be burned.

   d. The burning must not be conducted within 1,000 feet of any highway or public road and, in any event, must be controlled so that a traffic hazard is not created.

   e. The burning must not be conducted within one mile of any military, commercial, county, municipal, or private airport or landing strip.

   f. An exception to the prohibition and conditions of paragraph D, subsection 5 of this regulation may be granted by the Agency or its designated agent.

6. Open fires for ground thawing for underground utility repair and construction are allowed under the following conditions:

   a. Fires must be started with materials which do not generate appreciable smoke.

b. Fuel used must be coke of less than one percent sulfur content when the thawing site is within 500 feet of dwelling or occupied buildings. Coke of higher sulfur content may be used in remote areas except under conditions where an air pollution alert has been declared.

c. The ambient air quality for sulfur dioxide and carbon monoxide must not be exceeded downwind of the thawing site.

d. Wherever possible, including but not limited to spot repairs, propane gas thawing torches or other devices causing minimal pollution shall be used.

E. This regulation shall not be construed to allow open burning in those areas in which open burning is prohibited by other laws, regulations or ordinances.

SECTION 9 -- CONTROL OF ODORS IN THE AMBIENT AIR

A. Definitions. The following definitions shall apply in the interpretation and enforcement of this regulation and the following words and terms wherever they occur in this regulation are defined as follows:

1. Ambient air shall mean that portion of the atmosphere external to buildings to which the general public has access.

2. Odor concentration unit shall mean the number of standard cubic feet of odor-free air needed to dilute each cubic foot of contaminated air so that at least 50 percent of the odor concentration test panel does not detect any odor in the diluted mixture.

3. Odor emission rate shall mean the product of the number of standard cubic feet per minute of air or other gases emitted from a suspected odor pollution source and the number of odor concentration units determined for that source.

4. Odor source shall be defined as to include but not be limited to any stack, chimney, vent, window, opening, lagoon, basin, catch-basin, pond, open tank, storage, pile or any organic or inorganic discharge and/or application which emits odorous gas, gases or particulates.

B. Odorous Air Pollution Prohibited. No person shall cause, permit or allow emission into the ambient air of odorous air contaminants in excess of the

standards and parameters of section 9C. Such excessive emissions are air pollution in one or more of the ways enumerated in Minnesota Statutes, Section 116.06, Subdivisions 2 and 3.

C. Odor Emission Limits. Violation of section 9 shall be any discharge of air contaminants in excess of the following odor emission limits:

1. Odor sources emitting from well-defined stacks 50 feet or more above grade elevation and with adequate dispersion characteristics as determined by the Health Officer shall not emit odors in greater than 150 odor concentration units.

2. Odor sources of less than 50 feet elevation above grade or otherwise failing to create good dispersion conditions as determined by the Health Officer shall not emit more than 25 odor concentration units.

3. No odor source shall have an odor emission rate in excess of 1,000,000 odor concentration units per minute.

4. No odor source shall emit air contaminants into the ambient air which cause odor outside the alleged polluter's property line in excess of the following limitations.

   a. One odor unit in areas zoned residential, recreational, institutional, retail sales, hotel or educational.

   b. Two odor units in areas zoned light industrial.

   c. Four odor units in areas zoned other than in subsections a and b above.

D. Odor Testing. Odor testing shall be conducted as follows:

1. Odor tests shall be conducted by the Health Officer or under Health Officer supervision and advisement.

2. Odor test panel members shall be selected or approved by the Health Officer.

3. Ambient air samples containing the alleged odorous air pollution obtained downwind and outside the property line of the alleged polluter, and samples of the air contaminant from the odor source allegedly causing the odorous air pollution shall be obtained.

4. Procedures for obtaining such samples and presenting such samples to the test panel for tests shall be accomplished according to American Society for Testing Materials Method D-1391-57, or by other method approved by the Health Officer. The panel testing procedure shall be conducted by the method described by D. M. Benforado, W. J. Rotella and D. L. Horton, "Development of an Odor Panel for Evaluation of Odor Control Equipment", Journal of the Air Pollution Control Association, Volume 19, Number 2, Pages 101-105, February 1969; or by other method approved by the Health Officer.

5. All odor test panel members shall have a smell exposure to determine the odor concentration of the alleged air contaminant at the odor source and in the ambient air sample, and shall be questioned as to whether the air contaminant in the ambient air sample is contained in the sample obtained from the odor source of the alleged discharger. All responses shall be recorded under oath and notarized.

E. Equipment Breakdown. No person shall operate any process, process equipment, fuel-burning equipment or refuse-burning equipment when such process or equipment is out of repair and causing or permitting odorous air pollution. Emissions violating this regulation as a direct result of upset conditions in, or breakdown of any process, process equipment, fuel-burning equipment, or control equipment or related operating equipment beyond the control of the person owning or operating such equipment, shall not be deemed to be in violation of this regulation, provided that the owner or operator advises the Health Officer of the circumstances within 24 hours of the breakdown, and outlines a corrective program within 7 days of the breakdown. The Health Officer may permit operation on a temporary basis during the period of such an emergency shutdown not to exceed 30 days from the breakdown if such operation will not create an immediate serious public health or safety hazard. No equipment as defined above shall be operated which has an unreasonable breakdown frequency as determined by the Health Officer.

F. Agri-business Exception. The odor of growing vegetation shall not be considered odorous air pollution. The odor of domestic (organic) fertilizer, industrial (inorganic) fertilizer, and pesticides shall not be considered odorous air pollution if such substances are used effectively according to their intended purposes and application. The open storage (piling) of such materials shall be accomplished in a nuisance-free manner and in compliance with the regulations of federal, state and local government and their regulatory agencies.

G. Compliance with the provisions of this regulation shall not operate as a defense to an action at law based upon a public and/or private nuisance theory.

SECTION 10 -- CONTROL OF ODORS FROM PROCESSING OF ANIMAL MATTER

A. General

1. For purposes of this section the word "reduction" is defined as any heated process, including rendering, cooking, drying, dehydrating, digesting, evaporating, and protein concentrating. Animal matter is defined as any product or derivative of animal life.

2. The provisions of this section shall not apply to any device, machine, equipment, or other contrivance used exclusively for the processing of food for human consumption in food service establishments. A food service establishment shall include: any fixed or mobile restaurant; coffee shop; cafeteria; short-order café; luncheonette; grill; tearoom; sandwich shop; soda fountain; tavern; bar; cocktail lounge; night club; roadside stand; industrial feeling establishment; private, public or non-profit organization or institution routinely serving food; catering kitchen, commissary, or similar place in which food or drink is placed for sale or for service on the premises or elsewhere; and any other eating or drinking establishment or operation where food is served or provided for the public with or without charge.

B. Odor Control Equipment Required on Reduction Processes

No person shall operate or use any device, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors and gas-entrained effluents from such facility are incinerated at a temperature of not less than 1500?F for a period of not less than 0.3 second, or processed in such manner as determined by the Health Officer for indicating temperature, pressure, or other operating conditions.

C. Other Odor Control Measures Required

1. Effective devices and measures shall be installed and operated such that no vent, exhaust pipe, blow-off pipe or opening of any kind shall discharge into the outdoor air any odorous matter, vapors, gases, dusts, or any combination thereof which create odors or other nuisances in the neighborhood of the plant.

2. Odor-producing materials shall be stored and handled in such a manner that odors produced from such materials are confined. Accumulation of odor-producing materials resulting from spillage or other escape is prohibited.

3. Odor-bearing gases, vapors, fumes or dusts arising from materials in process shall be confined at the point or origin so as to prevent liberation of odorous matter. Confined gases, vapors, fumes or dusts shall be treated before discharge to the atmosphere, as required in section 10C1.

D. Enclosure of Building May be Required

When every dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building used for processing of animal matter in such manner and amount as to cause a violation of section 9, the Health Officer may instruct that the building or buildings utilized for processing, handling and storage be tightly closed and ventilated so that all air, and gases and air or gas-borne material are treated by incineration or other effective means before discharge into the open air.

SECTION 11 -- RESTRICTION OF EMISSION OF VISIBLE AIR CONTAMINANTS

A. Smoke restrictions applicable to existing installations including boats and ships except existing incineration. No person shall cause or permit the emission of smoke or any other air contaminant which has a shade or density:

1. Darker than No. 3 on the Ringelmann Smoke Chart or of such capacity as to obscure an observer's view to a degree equal to or greater than smoke of No. 3 Ringelmann density.

2. Darker than No. 2 on the Ringelmann Smoke Chart but less than No. 3 on said chart, if such emission continues for longer than 4 minutes in the aggregate in any 60-minute period, or of such opacity as to obscure an observer's view to a degree equal to or greater than smoke of No. 2, but less than No. 3 Ringelmann density during such period.

3. Darker than No. 1 on the Ringelmann Smoke Chart but less than No. 2 on said chart, if said emission continues for longer than 4 minutes in the aggregate in any 30-minute period, or of such opacity to obscure an observer's view to a degree equal to or greater than smoke of No. 1, but less than No. 2 Ringelmann density during such period.

   The density of smoke or other air contaminant shall be measured at the point of its emission, except, when the point of emission cannot be readily observed, measurement shall be made at the nearest observable point on the plume from the point of emission origin.

B. Smoke Restrictions Applicable to New Installations and All Incinerators. No person shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant which has a shade or density:

1. Darker than that designated as No. 1 on the Ringelmann Smoke Chart;

or

2. Of such opacity as to obscure an observer's view to a degree greater than smoke described in section 11B1.

C. Exceptions

1. A person may discharge into the atmosphere from any single source of emission for a period of periods aggregating not more than 4 minutes in any 60 minutes air contaminants of a shade or density:

a. Not darker than No. 2 on the Ringelmann Smoke Chart;

or

b. Of such opacity as to obscure an observer's view to a degree not greater than does smoke described in section 11C1a.

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of section 11, such section shall not apply. The provisions of this section shall not apply to:

(1) Transfer of molten metals;

(2) Emissions from transfer ladles;

(3) Coke ovens when pushing coke from oven:

(4) Water quenching of coke on discharge from ovens;

(5) Existing grey iron jobbing cupolas as defined in section 5; and

(6) Blast furnaces during slips.

2. A temporary operational breakdown of any equipment, installation or facility may be permitted by the Health Officer to be an exception to the provisions of section 11 provided the owner or operator immediately advised

the Health Officer of the circumstances and outlines an acceptable corrective program. A temporary breakdown of less than 15 minutes duration is an exception to the provisions of section 11 and need not be reported. No equipment, installation or facility shall be operated which has an unreasonable breakdown frequency as determined by the Health Officer. In any event, no operation that may cause an immediate public health hazard shall be deemed an exception from this regulation.

D. Ringelmann Smoke Chart. The Ringelmann Smoke Chart shall mean and include any of the following:

1. The Ringelmann Smoke Chart with instructions for use (Information circular 8333, May, 1967, Rev. of IC 7718) as published by the U.S. Bureau of Mines;

2. The Ringelmann Smoke Chart, photographically reduced to 1/19th in size and known as Power's Microringelmann Chart, copyright 1954 by McGraw-Hill Publishing Company; and

3. Such other method or apparatus for determining smoke density or opacity as the Health Officer may approve.

E. Notwithstanding the exemptions mentioned in this section, visible emissions existing at ground level past the lot line of the property on which the source of the emissions is located are prohibited.

SECTION 12 -- EMISSION OF VISIBLE AIR CONTAMINANTS FROM VEHICLES AND OTHER INTERNAL COMBUSTION ENGINES

A. No person shall cause or permit the emission of visible air contaminants from any internal combustion engine other than a diesel cycle engine for more than 10 consecutive seconds.

B. No person shall cause or permit the emission of visible air contaminants from any diesel cycle engine in excess of 20 percent opacity or No. 1 Ringelmann for engines produced prior to January 1, 1973, and in excess of 10 percent opacity or No. ½ Ringelmann for engines produced after January 1, 1973, for more than 10 consecutive seconds.

C. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this regulation, the provisions of this regulation shall not apply.

D. No person shall intentionally remove, alter or otherwise render inoperative, exhaust emission control, crankcase ventilation or any other air pollution control device which has been installed as a requirement of federal law or regulation.

E. No person shall operate a motor vehicle originally equipped with air pollution control devices as required by federal law or regulation unless such devices are in place and in operating condition.

SECTION 13 -- REQUIREMENTS FOR CONSTRUCTION OF NEW GASOLINE STORAGE FACILITIES

A. General

For purposes of this regulation, the term "gasoline" is defined as petroleum distillate having a Reid vapor pressure of four pounds or greater. The term "submerged fill pipe": is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches above the bottom of the tank. "Submerged fill pipe" when applied to a tank which is loaded from the side is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is 18 inches above the bottom of the tank.

B. Petroleum Storage Tanks

After the effective date of this regulation, no person shall build or install or permit the building or installation of any stationary tank, reservoir or other container of more than 65,000 gallons capacity which will or might be used for storage of any petroleum distillate having a vapor pressure of 2.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is to be a pressure tank capable of maintaining working pressure sufficient at all time to prevent hydrocarbon vapor or gas loss to the atmosphere or is designed, and will be built, and equipped with one of the following vapor loss control devices:

1. A floating roof which may be either pontoon or double deck type that will rest on the surface of the liquid contents and is equipped with a closure seal, or seals, closing any space between the roof edge and the tank wall or an internal floating cover or other device equally effective. The control equipment required by this subsection is not permitted if the gasoline or petroleum distillate to be stored will have a vapor pressure of 12.5 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except while gauging or sampling.

2. A vapor recovery system which includes a vapor-gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases that will prevent their emission to the atmosphere. All tank gauging and sampling devices shall be gas-tight except while gauging or sampling.

3. Other equipment or means of equal efficiency for purposes of air pollution control.

C. Submerged Fill Pipes Required.

After the effective date of this regulation, no person shall build or install or permit the building or installation of a stationary gasoline storage tank with a capacity of 250 gallons or more unless such tank is equipped with a permanent submerged fill pipe or is a pressure tank as described in subsection B1 of this regulation, or is fitted with a vapor recovery system as described in subsection B1 of this regulation.

SECTION 14 -- EMISSION OF CERTAIN SETTLEABLE ACIDS AND ALKALINE SUBSTANCES RESTRICTED

A. General Provisions

This regulation shall apply to all emissions from any sources or premises.

B. Method of Measurement

1. In determining compliance with this regulation, fallout sampling devices shall consist of circular glass dishes 15 centimeters in diameter which shall be supported on a nearly horizontal surface not larger than the dish. The dish bottom shall be at least three feet above the earth or other surface on which its support is resting and the dish shall be coated with a solution of thymol blue, ammonia water solution and gelatin dried to a yellow color in a vacuum oven at room temperature: prepared dishes shall be stored in a desiccator at 40 percent relative humidity, or in plastic bags.

2. Fallout sampling devices shall be placed at one or more locations beyond the premises on which a source or sources are located, up-wind and down-wind of such premises. The sampling devices shall be exposed to substances settling out of the ambient air for a period of one hour. The presence of red-colored spots on the gelatin indicates that acidic substances have settled out

of the air while the presence of blue-colored spots on the gelatin indicated that alkaline substances have settled out of the air. The number of spots visible on samples exposed up-wind of premises to be subtracted from the number of spots visible on samplers exposed down-wind of the same premises. The difference in the number of spots, if any, shall be construed to be attributable to emissions occurring on the premises under investigation.

3. In lieu of the test methods specified in B1 and 2, any other method approved by the Health Officer may be used.

C. Emissions Restricted

No person shall cause or permit the emission from any source or premises of substances having acidic or alkaline properties in such amounts that the down-wind fall out of acidic or alkaline substances at any place where an adverse effect could occur, exceeds the up-wind fallout rate by five or more spots per hour, measured in the manner prescribed in section B.

SECTION 15 -- SULFURIC ACID PLANT EMISSIONS

A. New Installations

1. No person shall cause or allow the discharge into the atmosphere of sulfur dioxide emissions in excess of 4 pounds per ton of acid produced.

2. No person shall cause or allow the discharge into the atmosphere of acid mist emissions in excess of 0.15 pound per ton of acid produced, maximum 2-hour average, express as H2SO4.

B. Existing Installations

1. No person shall cause or allow the discharge into the atmosphere of sulfur dioxide emissions in excess of 6.5 pounds per ton of acid produced.

2. No person shall cause or allow the discharge into the atmosphere of acid mist emissions in excess of 1.70 pounds per ton of acid produced, maximum 2-hour average, express as H2SO4.

C. Exceptions

The procedure for reporting breakdowns or shutdowns shall

be as outlined in Section 3. In any event, no operation that may cause an immediate public health hazard shall be deemed an exception from this regulation.

SECTION 16 -- NITRIC ACID MANUFACTURING PLANTS EMISSIONS

A. New Installations

No person shall cause or allow the discharge into the atmosphere of nitrogen oxides in excess of 3.0 pounds per ton of acid produced, maximum 2-hour average, expressed in nitrogen dioxide.

B. Existing Installations

No person shall cause or allow the discharge into the atmosphere of nitrogen oxides in excess of 5.5 pounds per ton of acid produced, maximum 2-hour average, expressed as nitrogen dioxide.

C. No person shall cause or permit a visible nitrogen oxides emission into the atmosphere.

D. Exceptions

The procedure for reporting breakdowns or shutdowns shall be as outlined in section 3. In any event, no operation that may cause an immediate public health hazard shall be deemed an exception from this regulation.

E. Method of Measurement

Nitrogen oxide testing shall be carried out by the method described in the Federal Register, Vol. 36, No. 159, dated August 17, 1971, and entitled "Standards of Performance for New Stationary Sources," 466.6S Method 7; or other test methodology approved by the Health Officer.

SECTION 17 -- ENFORCEMENT

A. Whenever the St. Louis County Health Department has reason to believe that a violation of any provision of this ordinance or a rule or regulation issued pursuant thereto has occurred, it may cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of the regulation alleged to be violated, and the facts alleged to constitute a violation thereof, and may order that the necessary corrective action be taken within a reasonable time. Any such order shall

become final unless, no later than five (5) days after the date such order is served, the person or persons named therein request in writing a hearing before the Board of Health. In lieu of such order, the Health Department may require that the alleged violator or violators appear before the Board of Health for a hearing at that time and place specified on the notice, to answer the charges complained of, or the Health Officer may initiate appropriate action for the recovery of a penalty pursuant to this regulation.

B. After such hearing the Health Officer shall affirm, modify, or rescind its order or issue an appropriate order or order for the prevention, abatement or control of the air pollution involved. Such order shall prescribe the date or dates by which the violation or violations shall cease and may prescribe timetables for necessary action in preventing, abating or controlling the air pollution.

C. Nothing in this regulation shall prevent the Health Officer from making efforts to obtain voluntary compliance through warning, conference, or any other appropriate means.

SECTION 18 -- EMERGENCY PROCEDURES

Notwithstanding the provision of this regulation or any other provision of law, if the Health Officer finds that any person is causing or contributing to air pollution and that such pollution creates an emergency which requires immediate attention and action to protect the public health or safety, the Health Officer shall order such person to reduce or discontinue immediately the air pollution and such order shall be complied with immediately. Upon issuance of any such order, the Health Officer, if requested by the person so ordered, shall fix a time and place for a hearing before the Board of Health, such hearing to be held within a reasonable time thereafter. No more than 24 hours after the conclusion of such a hearing, the order shall be affirmed, modified or set aside.

SECTION 19 -- COMPLIANCE STANDARDS

The St. Louis County Board of Health is hereby empowered to adopt minimum standards for compliance by all persons, companies, corporations and to alter, rescind or adopt further such compliance standards, from time to time, providing that no compliance standards supersede or conflict with this regulation or any subsequent amendments adopted by the St. Louis County Board of County Commissioners. Copies of such compliance standards and criteria shall be on file in each of the offices of the Health Department and be available for distribution to persons having a direct interest or concern with such compliance standards.

SECTION 20 -- EFFECTIVE DATE

This ordinance shall be in full force and effect from and after June 23, 1969.

Amended October 10, 1972

Commissioner Priley moved the adoption of the Ordinance and it was declared adopted upon the following vote:

Yeas: Commissioners Priley, Donaghy, Hall, Shannon, Hoff, Barrett, and Chairman Anderson
--7

Nays: None

Passed and approved as amended herein by the St. Louis County Board on the 10th day of October, 1972.

Attest: Clerk County Board Chairman, St. Louis County Board