

ORDINANCE NO. 1711

AN ORDINANCE to amend and reordain four existing definitions of, to add fourteen definitions to, to delete one definition from and to add a paragraph to Section 3B-2, to amend and reordain Sections 3B-3, 3B-4, 3B-8, the first paragraph of Section 3B-16, and the second sentence of the first paragraph of Section 3B-17, to amend Section 3B-5 by amending and reordaining subsection (b) thereof and by adding thereto a new subsection (d), to amend Section 3B-7 by amending and reordaining the first sentence of subsection (c), and subsection (e) thereof and by deleting subsection (g) therefrom, to delete Figure 1, and to delete Table 1 and to substitute in its place a new Table 1, all of the foregoing of Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended; which Chapter 3B relates to AIR POLLUTION CONTROL, which Section 3B-2 relates to DEFINITIONS, which four amended and reordained definitions thereof relate to AIR POLLUTION, ENGINEER, PARTICULATE MATTER and FUEL-BURNING EQUIPMENT, which fourteen new definitions thereof relate to AIR POLLUTION CONTROL OFFICER, AIR POLLUTION COORDINATOR, COMBUSTION INSTALLATION, DUST, FLY ASH, FUGITIVE DUST, FUMES, GASES, HEATING VALUE, INDIRECT HEATING FURNACE, ODOR, OPEN BURNING, PROCESS and STANDARD CONDITIONS, which definition to be deleted therefrom relates to OPEN FIRE, and which paragraph to be added thereto relates to THE MEANING OF TECHNICAL TERMS USED IN CHAPTER; which Section 3B-3 relates to SMOKE OR OTHER VISIBLE EMISSIONS and formerly related to VISIBLE EMISSIONS PROHIBITED; which Section 3B-4 relates to EMISSIONS OF PARTICULATE MATTER PROHIBITED; which Section 3B-8 relates to AIR POLLUTION ALERT; which Section 3B-16 relates to AIR POLLUTION CONTROL APPEAL BOARD and which first paragraph thereof relates to CREATION, ESTABLISHMENT AND COMPOSITION OF BOARD; which Section 3B-17 relates to APPEALS TO BOARD, which first paragraph thereof relates to PROCEDURE RELATING TO APPEAL, and which second sentence thereof relates to RECEIPT OF NOTICE OF APPEAL AND SETTING OF TIME AND PLACE FOR HEARING; which Section 3B-5 relates to EMISSIONS OF GASES, VAPORS AND ODORS PROHIBITED, which subsection (b) thereof relates to LAWFUL SULPHUR CONTENT OF FUELS, and which new subsection (d) to be added thereto relates to MOTOR VEHICLES; which Section 3B-7 relates to OPEN-BURNING EXCEPTIONS, which subsection (c) thereof relates to FIRES NECESSARY FOR PUBLIC HEALTH AND SAFETY and which first sentence thereof relates to WHEN FIRE NECESSARY, which subsection (e) thereof relates to OPEN-BURNING FOR CLEARING OF LAND, and which subsection (g) to be deleted therefrom relates to OPEN BURNING EXCEPTIONS DURING AIR POLLUTION ALERT; which Figure 1 to be deleted relates to MAXIMUM EMISSIONS OF PARTICULATE MATTER FROM FUEL BURNING INSTALLATIONS; which Table 1 to be deleted relates to MAXIMUM ALLOWABLE EMISSIONS OF PARTICULATE MATTER FROM ANY SOURCE BUT FUEL-BURNING EQUIPMENT AND INCINERATORS, and which new Table 1 to be substituted therefor relates to MAXIMUM ALLOWABLE EMISSIONS OF PARTICULATE MATTER FROM ANY SOURCE BUT INDIRECT HEATING FURNACES AND INCINERATORS.

THE CITY COUNCIL OF ALEXANDRIA HEREBY ORDAINS:

Section 1. That four existing definitions in Section 3B-2, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby are amended and reordained to read as follows:

Air Pollution. The presence in the outdoor atmosphere of one or more substances which are or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which unreasonably interfere with the enjoyment by the people of life or property.

Engineer. The Air Pollution Coordinator designated or appointed in the Health Department of the City of Alexandria.

Fuel-Burning Equipment. Shall mean any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power.

Particulate Matter. Any material (except uncombined water) that exists in a finely divided form as a liquid or solid at standard conditions of temperature (70° Fahrenheit) and pressure (14.7 pounds per square inch absolute).

(1) "Particulate Fallout Rate". Shall mean the amount of particulate matter which settles out of the air in given length of time over a given area as measured by the sampling procedures established by the American Society for Testing and Materials (ASTM Standard Method D-1739-62) or the Air Pollution Control Association (APCA Report No. APM-1, Revision 1), or recognized equivalent methods.

(2) "Suspended Particulate Matter". Shall mean the amount of particulate matter in the air as measured by a High-Volume Sampler (or other recognized equivalent methods) so located as to be representative of the air quality of the area affected.

(3) "Normal Background Value". Shall mean the value assigned to the quantity of material collected at a sampling station which originates from natural sources such as wind blown soil, forest fires, or cosmic dust, and measured by the sampling procedures specified in (1) and (2) above or recognized equivalent methods.

Section 2. That Section 3B-2, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by adding thereto fourteen new definitions to read as follows:

Air Pollution Control Officer. The Director.

Air Pollution Coordinator. The Engineer.

Combustion Installation. A furnace, oven, kiln, incinerator or any other stationary equipment in which solid, liquid or gaseous materials are burned.

Dust. Minute solid particles released into the air by natural forces or by mechanical processes such as but not limited to crushing, grinding, milling, drilling, demolishing, excavating, conveying, or fly ash from a combustion installation.

Fly Ash. Particulate matter capable of being gas-borne or air-borne and consisting of fused ash and partially burned or unburned fuel or other material from a combustion installation.

Fugitive Dust. Shall mean solid air-borne particulate matter emitted from any source other than a flue, stack, duct or chimney.

Fumes. Minute solid particles generated by the condensation of vapor from solid matter after volatilization from the molten state, or generated by sublimation, distillation, calcination or chemical reaction when these processes create air-borne particles.

Gases. Formless fluids which, under standard conditions, occupy the space of enclosure and which can be changed to the liquid or solid state only by the combined effect of increased pressure and decreased temperature.

Heating Value. The heat released by combustion of one pound of fuel or other material measured in British Thermal Units (BTU) on an as received basis.

Indirect Heating Furnace. Any equipment, device or contrivance and all appurtenances thereto, used primarily to burn any fuel for the purpose of indirect heating in which the material being heated is not contacted by and adds no substance to the products of combustion.

Odor. The sensation resulting from stimulation of the human sense of smell.

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

Process. Any action, operation, or treatment and the equivalent used in connection therewith, and all methods or forms of manufacturing or processing that may emit smoke, particulate matter or gases.

Standard Conditions. Shall mean a dry gas temperature of 70<sup>0</sup> Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

Section 3. That Section 3B-2, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by deleting therefrom the definition of OPEN FIRE.

Section 4. That Section 3B-2, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by adding thereto a new paragraph to read as follows:

Unless specifically defined herein, the technical terms used in this chapter have the meanings commonly ascribed to them by recognized authorities.

Section 5. That Section 3B-3, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

Sec. 3B-3. Smoke or Other Visible Emissions.

a. An owner shall not discharge into the outdoor atmosphere from any single source of emission whatsoever any air pollutant which is:

- (1) darker in shade than smoke designated as No. 1 on Ringelmann Smoke Chart, or
- (2) of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Smoke Chart (when used as a measure of opacity).

b. The limitation of subsection a. of this section shall not apply if an owner can show to the satisfaction of the Air Pollution Control Officer that:

- (1) the opacity of the visible emission is due to the presence of water vapor, or
- (2) the emissions comply with emission standards contained elsewhere in this Chapter.

c. The limitation of subsection a. of this section shall not apply to visible emissions resulting from starting a new fire in a cold furnace, cleaning a fire, blowing soot and similar operational requirements if for a length of time not to exceed 6 minutes in any 60 minute period and of a shade or equivalent opacity not greater than No. 3 on the Ringelmann Smoke Chart.

Section 6. That Section 3B-4, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

#### Sec. 3B-4. Emission of Particulate Matter Prohibited.

##### a. Indirect Heating Furnaces.

(1) No owner shall cause or permit from fuel-burning equipment burning solid fuel the emission to the atmosphere of particulate matter in excess of 0.10 pounds per million B.T.U. heat input per hour.

(2) No owner shall cause or permit emission to the atmosphere, from oil-fired fuel burning equipment rated greater than or equal to 250 million B.T.U. per hour heat input, or particulate matter in excess of 0.025 pounds per million B.T.U. heat input per hour.

(3) For purposes of this Chapter the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a flue, stack, duct or chimney. 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 on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

##### b. Incinerators.

(1) No owner shall cause or allow to be emitted into the outdoor atmosphere from any existing incinerator or to pass a convenient measuring point near the stack outlet, particulate matter to exceed 0.10 pounds per 100 pounds of refuse burned. This emission rate is equivalent to a grain loading of about 0.1 grains/SCF at 12 percent carbon dioxide.

(2) Incinerators which use the same flue, stack, duct or chimney for feeding the refuse and discharging the products of combustion are prohibited.

(3) For purposes of this Chapter the total capacity of all furnaces within one system shall be considered as the incinerator capacity.

c. Refuse Burning. The burning of refuse in indirect heating furnaces is prohibited except in equipment from which no visible emissions in excess of that permitted by Section 3B-3 and no particulate matter in excess of that permitted by Section 3B-4 are emitted, and no odors arising from the installation are observable beyond the premises on which the installation is located.

d. Other Than Incinerators and Indirect Heating Furnaces.

(1) The maximum allowable emission of particulate matter from any source whatever except indirect heating furnaces and incinerators shall be determined from Table 1. Where the process weight (moisture free basis) per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. Where the process weight is in excess of 60,000 pounds per hour, there shall not be discharged in any one hour from any source whatever except indirect heating furnaces and incinerators particulate matter in excess of 40 pounds per hour or in excess of 0.03 grains per standard cubic foot of exhaust gas.

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

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

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

e. Stack, Duct, Flue or Chimney Emission Test. Stack, duct, flue, or chimney emission test for particulate matter shall be conducted, where feasible, at maximum burning capacity of the unit. This capacity shall be the manufacturer's or designer's guaranteed maximum rate.

f. Fugitive Dust. No owner shall cause or permit any material to be handled, transported or stored in a manner which allows or may allow particulate matter to become air-borne in such quantities as to create a nuisance. No owner shall cause or permit a building or its appurtenances or a road to be constructed, altered, repaired or demolished without taking reasonable precaution to prevent particulate matter from becoming air-borne in such quantities as to create a nuisance. The use of sand-blasting for cleaning building exteriors is prohibited in residential-commercial areas. In industrial areas, hooding or shrouding must be used to contain the dust. No person shall cause, permit or allow the operation of drilling rigs without use of dust control devices to effectively control air-borne particulate matter.

Section 7. That subsection (b) of Section 3B-5, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

b. Fuels. It shall be unlawful for any owner to use or cause, suffer or allow the use of fuels the sulphur content of which exceeds one percent by weight.

Section 8. That Section 3B-5, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by adding thereto a new subsection (d) to read as follows:

d. Motor Vehicles. The engine, power and exhaust mechanism of every motor vehicle shall be so equipped, adjusted and operated as to prevent the escape therefrom of excessive smoke or fumes. Other than for authorized repair or replacement no person shall cause, allow, or permit the removal, disconnection or disabling of a crankcase emission control system or device, exhaust emission control system or device, fuel evaporative emission control system or device, or other air pollution control system or device which has been installed on a motor vehicle in accordance with federal, state or local laws and regulations; nor shall any person defeat the design purpose of any such motor vehicle pollution control system or device by installing therein or thereto any part of component which is not a standard factory replacement part or component of the device; nor shall the motor vehicle or its engine be operated with the motor vehicle pollution control system or device removed or otherwise rendered inoperable.

Section 8.1. That the first sentence of subsection (c) of Section 3B-7, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended be and the same hereby is amended and reordained to read as follows:

In the performance of any official duty of any public health or safety officer if the fire is necessary for one or more of the following reasons or purposes:

Section 9. That subsection (e) of Section 3B-7, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

e. For the clearing of land provided a permit is first obtained from the director and the chief of the fire prevention bureau, and further provided no nuisance is created by smoke. The director and chief of the fire prevention bureau shall not issue permits in any such instance where by recognized standards a fire hazard or air pollution hazard would exist. A permit shall not be issued hereunder until after a public hearing has been held by the director and the chief of the fire prevention bureau. Such hearing shall be held only after notice published in at least one newspaper of general circulation in the city, not less than fifteen nor more than thirty days prior to the day on which the public hearing will be held. The published notice shall include a statement of the time, place and nature of the hearing. At the public hearing an opportunity shall be afforded all interested persons to be heard concerning the issuance of the permit. The chief of the fire prevention bureau and the director shall in any such permit set forth the conditions of and the manner under which any such burning shall be conducted.

Section 10. That Section 3B-7, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by deleting subsection (g) therefrom.

Section 11. That Section 3B-8 of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

Sec. 3B-8. Air Pollution Alert.

The Air Pollution Alert Plan for the City of Alexandria will be as follows:

I. Watch

a. Declaration. The director shall declare the Watch stage when:

(1) The National Weather Service's Atmospheric Stagnation Advisory is in effect in the city, or

(2) There is an equivalent local forecast of stagnant atmospheric conditions.

b. Action. When the Watch stage has been declared the following provisions shall apply:

(1) An internal, administrative watch shall be maintained in the Department of Public Health.

(2) The director shall accelerate the manual sampling of air pollutants and coordinate his findings with neighboring jurisdictions and the weather bureau.

II. Advisory

a. Declaration. The director shall declare the Advisory stage when:

(1) Any one of the following pollutant levels is reached:

(a) SO<sub>2</sub>--0.3 p.p.m. 24 hour average.

(b) Particulate--3.0 COHs, 24-hour average. (COHs is the coefficient of haze; a measure of the loss of visibility due to fine suspended particulates in the atmosphere.)

(c) SO<sub>2</sub> and particulate combines--product of SO<sub>2</sub> p.p.m., 24-hour average and COHs equal to 0.2.

(d) CO--15 p.p.m., 8-hour average.

(e) O<sub>x</sub>--0.1 p.p.m., 1-hour average.

(f) NO<sub>2</sub>--0.6 p.p.m., 1-hour average, 0.15 p.p.m., 24-hour average.,

and

(2) Meteorological conditions are such that this pollutant level can be expected to continue for twelve (12) or more hours.

b. Action. When the Advisory stage has been declared the following provisions shall apply:

(1) The Action provision of the Watch stage shall continue to apply.

(2) No open burning shall be allowed under subsections (d), (e) and (f) of Section 3B-7.

(3) The director shall ask the city manager to request the directors of public works, building and mechanical inspections, and traffic departments, and the chiefs of the police department and fire prevention bureau to take appropriate actions, within their power, to help abate the level of air pollution.

### III. Warning

a. Declaration. The director shall declare the Warning stage when:

(1) Any one of the following pollutant levels is reached:

- (a) SO<sub>2</sub>--0.6 p.p.m., 24-hour average.
- (b) Particulate--6.0 COHs, 24-hour average.
- (c) Combined SO<sub>2</sub> and COHs, 24-hour average, SO<sub>2</sub> and COHs equal to 1.0.
- (d) CO--30 p.p.m., 8-hour average.
- (e) O<sub>x</sub>--0.4 p.p.m., 1-hour average.
- (f) NO<sub>2</sub>--1.2 p.p.m., 1-hour average, 0.3 p.p.m., 24-hour average.,

and

(2) Meteorological conditions are such that this pollutant level can be expected to continue for twelve (12) or more hours.

b. Action. When the warning state has been declared the following provisions shall apply:

(1) The Action provisions of the Watch and Advisory stages shall continue to apply.

(2) The director shall establish an Air Pollution Control Center in the department of public health to provide information and advice to individuals on how to alleviate the effects of the pollutant level.

(3) The department of public health shall increase its investigations of the sources of air pollution.

(4) The director shall ask commercial and industrial establishments to reduce voluntarily their level of pollutant emissions.

(5) The director shall notify local hospitals of the possible effect that the air pollution level might have on their case load.

### IV. Emergency

a. Declaration. The director shall declare the Emergency stage when:

(1) Any pollutant level of the Warning stage has been exceeded,  
and

(2) The concentration of that pollutant is continuing to increase,  
and

(3) The director determines that because of meteorological or other factors the concentration of that pollutant will continue to increase.

b. Action. When the Emergency stage has been declared, the following provisions shall apply:

(1) The Action provisions of the Watch, Advisory and Warning stages shall continue to apply.

(2) The director shall mobilize all resources of his department and may operate his department on an overtime basis.

(3) The director shall recommend to the proper authorities the closing of all schools, non-essential public buildings and places of public assembly.

(4) The director shall notify local hospitals that it may be advisable to delay all but emergency surgery because of the possible increased risks resulting from the pollution level.

(5) The director shall ask the public to limit voluntarily the use of motor vehicles to essential and emergency travel.

(6) The director may order a ban on the use of all incinerators in the city, except municipal incinerators, if in his professional judgment he has reason to believe that it is necessary to protect the public health.

#### V. Termination

The director shall declare the termination of any stage when atmospheric conditions and pollutant levels have fallen below those established for that stage. Upon the termination of any stage the director shall also declare what stage, if any, of the city's Air Pollution Alert Plan is in effect.

#### VI. Announcement of Stages and Terminations.

Whenever the director declares that any stage of the city's Air Pollution Alert Plan, other than the Watch stage, is in effect or is terminated he shall announce it immediately to the area radio and television stations and newspapers so that the public will be informed.

The declaration of any stage but the Watch stage shall include:

a. A statement of the effect on public health that might result unless preventive action is taken.

b. A statement of the Action provisions of the declared stage.

c. A statement listing voluntary actions that people in the city can take to lessen the effects of the pollution level.

#### VII. Determination of Pollutant Levels

The pollutant levels for the Advisory, Warning and Emergency stages shall be determined from instrument readings at a site representative of ambient air quality in the city.

Section 12. That the first paragraph of Section 3B-16, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

There is hereby created and established an air pollution control board, herein sometimes referred to as the "board", which shall consist of the director of public works and two (2) residents of the city having some knowledge of air pollution and air pollution control equipment. The resident members shall be appointed by the city council for terms of three (3) years.

Section 12.1. That the second sentence of the first paragraph of Section 3B-17, Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended and reordained to read as follows:

Upon receipt of such notice of appeal, the city manager shall promptly notify the board, and the board shall set a time and place for such hearing and shall give the owner appealing and the director notice thereof.

Section 13. That Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by deleting therefrom Figure 1.

Section 14. That Chapter 3B of The Code of the City of Alexandria, Virginia, 1963, as amended, be and the same hereby is amended by deleting therefrom Table I and by substituting in its place a new Table I to read as follows:

TABLE 1

<u>Process weight rate (lb./hr.)</u>	<u>Rate of emission (lb./hr.)</u>
100	0.55
200	0.88
400	1.40
600	1.85
800	2.22
1,000	2.58
1,500	3.38
2,000	4.10
2,500	4.76
3,000	5.38
3,500	5.96
4,000	6.52
5,000	7.58
6,000	8.56
7,000	9.49
8,000	10.4
9,000	11.2
12,000	13.6
16,000	16.5
18,000	17.9
20,000	19.2
30,000	25.2
40,000	30.5
50,000	35.4
60,000 or more	40.0

Section 15. That this ordinance shall be published in a newspaper of general circulation in the city not later than five days following its introduction together with a notice containing the time and place for a public hearing. The clerk of the council shall note the date of introduction and first reading, the date of publication, the date of the public hearing, and the date of the second reading and final passage in the minutes of the meeting. This ordinance shall become effective the date of its final passage.

Charles E. Beatley, Jr.  
Mayor

Final Passage - June 8, 1971