

Chapter 05 Air Pollution Episode System

.01 Definitions.

A. "Air Stagnation Advisory (ASA)" means a forecasted atmospheric stagnation that is expected to last 36 hours or more.

B. "Atmospheric stagnation" means a measure of the inability of the atmosphere to adequately dilute and disperse pollutants emitted into it, based on values of specific meteorological parameters of the microscale, mesoscale, and macroscale features, and which satisfies the criteria established by the National Meteorological Center set forth in Environmental Science Service Administration Technical Memorandum WBTM-NMC 47 published by the Department of Commerce, May, 1970.

C. "Chemical and allied products industries" means establishments engaged in the manufacture of:

(1) Basic chemicals such as acids, alkalies, salts, industrial gases, and organic chemicals;

(2) Chemical products to be used in further manufacturing such as synthetic fibers, plastics, dry colors, and pigments;

(3) Finished chemical products to be used for ultimate consumption such as drugs, cosmetics, soap, paints, fertilizers, and explosives (Standard Industrial Classification, Major Group 28).

D. "Emergency" means a sudden, unexpected, and unforeseen condition of such public gravity and exigency as to require immediate action, or a condition which is predicted with reasonable certainty to require immediate action to carry out the purposes of this subtitle.

E. "Glass, clay and concrete products industries" means establishments engaged in the manufacture of glass, glassware, textile fibers, glass insulation, wool, structured clay products, concrete products, gypsum and plastic products, lime abrasives, and asbestos (Standard Industrial Classification, Major Group 32).

F. "Paper and allied products industries" means establishments engaged in manufacturing wood pulp from wood or other materials and the manufacture of paper, paperboard, and building paper (Standard Industrial Classification, Major Group 26).

G. "Petroleum refining and related industries" means establishments engaged in petroleum refining, the manufacture of paving and roofing materials from petroleum products, and compounding paving and building materials and petroleum products (Standard Industrial Classification, Major Group 29).

H. "Pollutant Standards Index (PSI)" means a standardized reporting system for advising the public of possible adverse health effects due to air pollution. PSI is a reporting tool that converts measured air pollutant concentrations to a simple number on a scale of 0 to 500. A level of 100 on the PSI scale corresponds to the National Ambient Air Quality Standard for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, or particulate matter. Only the highest PSI is reported for any one period. The levels between 0 and 100 correspond to a percentage of the standard, while

the levels between 100 and 500 are uniform intervals between the National Ambient Air Quality Standard and the "significant harm level", as defined by the U.S. Environmental Protection Agency.

I. "Primary metals industries" means establishments engaged in the:

(1) Smelting, refining, sintering, and alloying of ferrous and nonferrous metals from ore, pig or scrap; and

(2) Manufacture of castings, forging, powdered metals, and other basic products of ferrous and nonferrous metals, including the production of coke (Standard Industrial Classification, Major Group 33).

J. "Special Dispersion Statement (SDS)" means a forecasted atmospheric stagnation that is expected to last more than 12 hours but less than 36 hours.

.02 General Requirements.

A. An air pollution episode system establishes standards and procedures to be followed whenever pollution of the air has the potential of reaching an emergency condition if allowed to go unchecked.

B. Whenever the Governor, the Secretary, or the Secretary's designee determines that the accumulation of air pollution may attain, is attaining, or has attained a level or levels considered injurious to human health, conditions of air pollution designated as Standby Watch, Health Advisory, Alert, Warning, and Emergency shall be declared. In making a determination, the Governor, the Secretary, or the Secretary's designee shall be guided by criteria defined in Regulation .03.

C. To assure compliance with this chapter, sources designated by the Secretary or the Secretary's designee shall submit standby emission reduction plans in accordance with Regulation .04. In accordance with the standby emission reduction plans, standby orders as specified in Regulation .05 shall be implemented as a designated level is reached.

D. Nothing contained in these regulations shall be construed as allowing, permitting, or maintaining an emission from any installation in the State to be subject to a lesser degree of control as may be required for existing or new regulations adopted by the Secretary.

E. During air pollution episodes, sources having an interstate air pollution potential shall be governed by the following:

(1) Air pollution emissions within the jurisdiction of the State shall be controlled to the extent that neighboring state requirements are not compromised.

(2) Provisions of these regulations shall apply to installations within the State when a receptor state demonstrates, to the satisfaction of the Secretary, that a source or sources within Maryland is substantially affecting established emergency episode criteria in the receptor state.

.03 Air Pollution Episode Criteria.

A. A condition justifying the proclamation of a Standby Watch, Health Advisory, Alert, Warning, or Emergency shall be deemed to exist whenever the Governor, the Secretary, or the Secretary's designee determines that the accumulation of air pollutants in any place, locality, county,

or other area in the State may attain, is attaining, or has attained levels which, if sustained or exceeded, would lead to a threat to the health of the public. In making this determination, the Secretary or his designee shall be guided by the specified conditions in Sec. B, C, and D, below.

B. Episode Criteria.

(1) Standby Watch Stage. The Department shall declare a standby watch stage whenever one or more of the following conditions exists:

(a) Forecasted meteorological conditions that are expected to last at least 12 hours and may inhibit pollutant dispersion or increase pollutant concentration.

(b) A Special Dispersion Statement (SDS) has been issued by the Department.

(c) An Air Stagnation Advisory (ASA) has been issued by the Department. Upon declaration of an Air Stagnation Advisory, the Department shall make a public announcement of this declaration within 2 hours.

(d) Measured air pollutant concentrations exceed a PSI of 83.

(2) Health Advisory Stage. The Department shall declare a Health Advisory when measured air pollutant concentrations cause the PSI to exceed 100.

(3) Alert Stage. An Alert shall be declared by the Secretary or his designee when any one or more of the following pollutant levels in Sec. B(3)(c), below, is attained concurrent with:

(a) A judgment by the Department that the pollutant level is representative of air quality in a significant portion of the region. The Department shall consult the air pollution control agencies of the affected jurisdictions to help evaluate local situations.

(b) Meteorological conditions are such that pollutant dispersion is expected to be inhibited for 12 or more hours.

(c) Pollutant levels:

<u>Pollutant</u>	<u>Level</u>
(i) Sulfur dioxide	0.3 ppm 24 hour average
(ii) PM ₁₀	180 ug/m ³ 24 hour average
(iii) Carbon monoxide	15 ppm 8 hour average
(iv) Ozone	0.2 ppm 1 hour average
(v) Nitrogen dioxide	0.6 ppm 1 hour average or 0.15 ppm 24 hour average

(4) Warning Stage. A Warning shall be declared by the Secretary or his designee when any one or more of the following pollutant levels in Sec. B(4)(c), below, is attained concurrent with:

(a) A judgment by the Department that the pollutant level is representative of air quality in a significant portion of the region. The Department shall consult the air pollution control agencies of the affected jurisdictions to help evaluate local situations.

(b) Meteorological conditions are such that pollutant dispersion is expected to be inhibited for 12 or more hours.

(c) Pollutant levels:

<u>Pollutant</u>	<u>Level</u>
(i) Sulfur dioxide	0.6 ppm 24 hour average
(ii) PM ₁₀	360 ug/m ³ 24 hour average
(iii) Carbon monoxide	30 ppm 8 hour average
(iv) Ozone	0.4 ppm 1 hour average
(v) Nitrogen dioxide	1.2 ppm 1 hour average or 0.3 ppm 24 hour average

(5) Emergency Stage. An Emergency shall be declared by the Governor when any one or more of the following pollutant levels in Sec. B(5)(c), below, is attained concurrent with:

(a) A judgment by the Department that the pollutant level is representative of air quality in a significant portion of the region. The Department shall consult the air pollution control agencies of the affected jurisdictions to help evaluate local situations.

(b) Meteorological conditions are such that this condition can be expected to continue for 12 or more hours.

(c) Pollutant levels:

<u>Pollutant</u>	<u>Level</u>
(i) Sulfur dioxide	0.8 ppm 24 hour average
(ii) PM ₁₀	480 ug/m ³ 24 hour average
(ii) Carbon monoxide	40 ppm 8 hour average
(iv) Ozone	0.5 ppm 1 hour average
(v) Nitrogen dioxide	1.6 ppm 1 hour average or 0.4 ppm 24 hour average

(6) Termination. Termination of all stages of the Air Pollution Episode System shall be called by the Secretary or his designee or by the Governor based on:

(a) Consultation with the federal or Department meteorologist which indicates that the atmospheric conditions justify termination; and

(b) Appropriate reduction in pollutant levels below the Alert Stage criteria.

C. An episode condition has been reached if ambient air quality is measured to be in excess of the designated levels at any monitoring site in the State, except when elevated pollution levels exist in an area that may be reduced by controlling emissions from one or a few individual sources contributing to the condition. The localized condition shall be known as an incident, and the involved individual sources shall be subject to the same provisions as listed for the abatement of episodes.

D. All episode stages may be activated on the basis of deteriorating air quality alone; that is, an atmospheric stagnation forecast need not be in effect. (Subject to the conditions specified in Sec. B(2), (3), (4), and (5).)

.04 Standby Emission Reduction Plans.

A. When requested by the Department, any person responsible for the operation of an installation specifically identified in Table I, II, or III of this chapter shall prepare in writing, standby emission reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency. Standby emission reduction plans shall be designed to reduce or eliminate emissions in accordance with the objectives set forth in Tables I, II, and III as applicable.

B. When requested by the Department, any person responsible for the operation of a source of emissions not specifically identified under Sec. A shall prepare, in writing, standby emission reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency. Standby emission reduction plans shall be designed to reduce or eliminate emissions in accordance with the objectives set forth in Tables I, II, and III as applicable.

C. Standby emission reduction plans as required in Sec. A and B shall be in writing and show the source of emissions, the approximate amount of reduction of emissions to be achieved, the time necessary to achieve the reduction after being notified to implement the plan, and a description of the manner in which the reduction will be achieved during an Alert, Warning, and Emergency period in accordance with the objectives set forth in Tables I, II, and III. These plans shall be submitted in the form specified by the Department.

D. During a condition of Alert, Warning, or Emergency, standby emission reduction plans as required by this regulation shall be made immediately available on the premises to any person authorized to enforce regulations promulgated under terms of the Air Quality Control Act.

E. Standby emission reduction plans as required by this regulation shall be submitted to the Department upon request within 30 days of receipt of the request. Standby emission reduction plans shall be subject to review and approval by the Department. If, in the opinion of the Department, the standby emission reduction plans do not carry out the objectives set forth in Tables I, II, and III, the Department may disapprove of the standby emission reduction plans, state its reason for disapproval, and recommend specific amendments to the proposed standby emission reduction plans. The revised plans shall be resubmitted within a time period specified by the Department.

F. Any person aggrieved by an order requiring the preparation of a revised plan shall be entitled to a hearing, upon written request filed within 10 days after the receipt of the order. When a hearing is requested by the aggrieved, it shall be held pursuant to Environment Article, Sec. 2-605, Annotated Code of Maryland.

G. If any person fails to submit a standby emission reduction plan within the time period specified, or if, in the opinion of the Department, a submitted plan does not carry out the objectives set forth in Tables I, II, and III, the Department shall promulgate such standby emission reduction as will meet the objectives set forth in Tables I, II, and III. The plan shall thereafter be the standby emission reduction plan which the person responsible shall put into effect upon the declaration by the Secretary or the Governor of an air pollution Alert, Warning, or Emergency.

.05 Control Requirements and Standby Orders.

The following are standby orders which are hereby established according to specific action stages of the Air Pollution Episode System which may be deemed appropriate for use by the Secretary or the Governor upon the declaration that the specified stage has been reached. When announced by the Secretary or the Governor, through public communications media or otherwise, that the specified stage of the Air Pollution Episode System exists, the following respective actions shall be taken when requested in the geographical areas included in the episode announcement:

A. Standby Watch Stage and Health Advisory Stage. Specified open burning and all public insecticide and herbicide spraying shall cease, if so requested by the cognizant local government control officer in public announcements or otherwise.

B. Alert Stage.

(1) Open burning or public pesticide or herbicide spraying may not be carried on.

(2) All on-site incineration shall be eliminated.

(3) Any person responsible for a source of air pollution as set forth in Table I in Regulation .06 shall take all Alert Stage actions as required for the source of air pollution, and shall particularly put into effect the standby emission reduction plan for an Alert Stage. These persons shall prepare to put into effect the standby emission reduction plan for an air pollution Warning.

C. Warning Stage.

(1) Open burning or public pesticide or herbicide spraying may not be carried on.

(2) All incineration shall be eliminated.

(3) Any person responsible for a source of air pollution as set forth in Table II in Regulation .06 shall take all Warning Stage actions as required for the source of air pollution, and shall particularly put into effect the standby emission reduction plan for a Warning Stage. These persons shall prepare to put into effect the standby emission reduction plan for an air pollution Emergency.

D. Emergency Stage.

(1) The Governor shall announce that an air pollution Emergency has been declared and specify appropriate action to be taken. Radio and television stations shall be requested to repeat the declaration at least once per hour.

(2) Open burning or public pesticide or herbicide spraying may not be carried on.

(3) All incineration shall be eliminated.

(4) Any person responsible for the operation of a source of air pollution as set forth in Table III in Regulation .06 shall take all Emergency Stage actions as specified for the source of air pollution, and shall particularly put into effect the standby emission reduction plans for an air pollution Emergency stage.

(5) All manufacturing establishments except those included in Sec. D(4) shall institute action that will eliminate or result in maximum reduction of emissions from their operations by ceasing,

curtailing, or postponing operations which cause emissions, to the extent possible without causing injury to persons or damage to equipment.

(6) All places of business, employment, and education described below shall immediately cease operations, unless special permission is obtained from a police officer or a governmental public health agency:

(a) Mining and quarrying of nonmetallic materials;

(b) All contract construction work except that which must proceed to avoid physical harm, hazardous conditions, or excessive economic loss;

(c) Wholesale trade establishments, that is, places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional, or professional users, or to other wholesalers, or agents in buying merchandise for or selling merchandise to those persons or companies;

(d) All offices of federal, local, county, and State government, except to the extent that the offices must continue to operate in order to carry out the requirements of this plan, and those offices which provide essential services for maintenance of public health and safety;

(e) All retail trade establishments except pharmacies and stores primarily engaged in the sale of foods;

(f) Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services, offices or insurance carriers, agents, and brokers, real estate offices;

(g) Wholesale and retail laundries, laundry services and cleaning and drying establishments, photographic studios, beauty shops, barber shops, and shoe repair shops;

(h) Advertising offices, consumer credit reporting, adjustment and collection agencies, duplicating, addressing, blueprinting, photocopying, mailing list, and stenographic services, equipment rental services, garages;

(i) All wholesale and retail handling of gasoline;

(j) Establishments rendering amusement and recreation services including motion picture theaters;

(k) Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, public and private libraries;

(l) Others deemed necessary to protect the public health and welfare and as announced by the Governor.

(7) All aircraft shall be grounded with the exception of emergency flights.

(8) A person may not use a motor vehicle, with the exception of emergency and governmental vehicles. Persons will be allowed to return to their residences from work or locations other than their residences and to make other trips essential to protect health and safety.

(9) Rail, bus, and ship travel and all other forms of transportation shall be regulated and halted, where possible, and appropriate times for curtailing or ceasing operations allowed.

(10) Sources of pollution involved in military training, smoke school training, fire department training, rocket fuel testing, etc. shall be stopped.

(11) Every person shall do such acts or refrain from such acts as shall be specified in the Governor's declaration that an air pollution Emergency exists and as shall be specified in other announcements made or authorized by the Governor.

.06 Tables.

A. Table I

EMISSION REDUCTION OBJECTIVES FOR THE ALERT STAGE*

Source of Emissions	Alert Stage Actions
(1) Coal or oil-fired electrical power generating facilities	(a) Substantial reduction of emissions by utilizing fuels having low ash and sulfur content (use gaseous fuels where possible) (b) Substantial reduction of emissions by diverting loads to electric power generating facilities outside of Alert area
(2) Coal or oil-fired steam producing facilities having a capacity to burn in excess of 4 tons (3630 kilograms) of coal per hour or 600 gallons (2.34 cubic meters) of fuel oil per hour	(a) Substantial reduction of emissions by utilization of fuels having low ash and sulfur content (use gaseous fuels where possible) (b) Substantial reduction of steam load demands consistent with continuing plant operations
(3) Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification, Major Groups 26 Paper and allied products industry 28 Chemical and allied products industry 29 Petroleum refining and related industry 32 Glass, clay, and concrete products 33 Primary metal industry	(a) Substantial reduction of emissions from manufacturing operations by curtailing, postponing, or deferring production and allied operations (b) Substantial reduction of emissions by deferring by-product or trade waste disposal processes which emit air pollution (c) Substantial reduction of heat load demands
(4) On-site incineration	Stop all incineration except that resulting from public collection of refuse
(5) Any source of air pollutants, not covered above, upon written request of the Department may be required to submit standby plans describing emission cutbacks to be taken if an Alert is called	All possible substantial reductions consistent with requirements for safety of people and preservation of property

* Actions specified under source of emissions categories 1, 2, 3, and 4 are primarily for control of particulate matter and/or oxides of sulfur emissions, and will be instituted only when the Alert stage is called for these pollutants, unless otherwise specified in a specific emission reduction plan.

B. Table II

EMISSION REDUCTION OBJECTIVES FOR THE WARNING STAGE*

Source of Emissions	Warning Stage Actions
(1) Coal or oil-fired electric power generating facilities	<p>(a) Maximum reduction of emissions to provide essential power needs by utilization of fuels having lowest ash and sulfur content (use gaseous fuels where possible)</p> <p>(b) Maximum reduction of emissions by diverting electric power generation to facilities outside of Warning area</p>
(2) Coal or oil-fired steam producing facilities having a capacity to burn in excess of 4 tons (3630 kilograms) of coal per hour or 600 gallons (2.34 cubic meters) of fuel oil per hour	<p>(a) Maximum reduction of emissions by utilization of fuels having the lowest available ash and sulfur content (use gaseous fuels where possible)</p> <p>(b) Maximum reduction of heat and steam demands to absolute necessities consistent with preventing equipment damage</p> <p>(c) Make ready for emergency action if Emergency stage declared</p>
(3) Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification, Major Groups 26 Paper and allied products 28 Chemical and allied products industry 29 Petroleum refining and related industries 32 Glass, clay, and concrete products 33 Primary metal industries	<p>(a) Maximum reduction of emission from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment</p> <p>(b) Maximum reduction of emissions by deferring by-product or waste disposal processes which emit air pollution</p> <p>(c) Maximum reduction of heat load demands</p>
(4) Refuse incinerators	Complete elimination of the use of all incinerators
(5) Any source of air pollutants, not covered above, upon written request of the Department may be required to submit standby plans describing emission cutbacks to be taken if a Warning is declared	Maximum reduction possible consistent with requirements for safety of people and preservation of property

* Actions specified under source of emissions categories 1, 2, 3, and 4 are primarily for control of particulate matter and/or oxides of sulfur emissions, and will be instituted only when the Warning stage is called for these pollutants, unless otherwise specified in a specific emissions reduction plan.

C. Table III

EMISSION REDUCTION OBJECTIVES FOR THE EMERGENCY STAGE*

Source of Emissions	Emergency Stage Actions
(1) Coal or oil-fired electric power generating facilities	(a) Maximum reduction of emissions to provide essential power needs by utilization of fuels having lowest ash and sulfur content (use gaseous fuels where possible) (b) Maximum reduction of emissions by diverting electric power generation to facilities outside of Emergency area
(2) Coal or oil-fired steam producing facilities having a capacity to burn in excess of 4 tons (3630 kilograms) of coal per hour or 600 gallons (2.34 cubic meters) of fuel oil per hour	(a) Maximum reduction of heat and steam demands to absolute necessities consistent with preventing equipment damage (b) Take actions called for in the Emergency portions of the standby emission reduction plan
(3) Manufacturing industries of the following classification which employ more than 20 employees at any one location: Standard Industrial Classification, Major Groups 26 Paper and allied products 28 Chemical and allied products industries 29 Petroleum refining and related industries 32 Glass, clay, and concrete products 33 Primary metal industries	(a) Elimination of emissions from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment (b) Elimination of emissions from by-product or trade waste disposal processes which emit air pollution (c) Maximum reduction of heat load demand
(4) Refuse incinerators	Complete elimination of the use of all incinerators
(5) All standby emission reduction plans required by the Department and not already in effect or described above, shall be implemented	

* Actions specified under source of emissions categories 1, 2, 3, and 4 are primarily for control of particulate matter and/or oxides of sulfur emissions and will be instituted only when the Emergency stage is called for these pollutants, unless otherwise specified in a specific emissions reduction plan.

