

# 61-62.3

## Air Pollution Episodes

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## SECTION I. - EPISODE CRITERIA

Conditions justifying the proclamation of any stage of an air pollution episode shall be deemed to exist whenever the Commissioner determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to substantial threat to the health of persons. The appropriate episode stage will be declared on a regional basis, as dictated by air quality monitoring. Adverse air quality need not be regionwide to trigger control actions; the appropriate episode stage will be declared for an entire Air Quality Control Region when any monitoring site within the region records ambient air quality in excess of that designated in the criteria. In making this determination, the Commissioner will be guided by the criteria listed below:

1. FORECAST - This level will normally be activated when an Air Stagnation Advisory (ASA) is issued for any part of South Carolina by the Columbia Forecast Office of the National Weather Service. If continuous air monitoring equipment indicates an upward trend in pollutant concentrations, the Commissioner may request that the National Weather Service issue an ASA, even though meteorological factors do not appear critical. In the absence of an ASA, the Commissioner may, at his discretion, declare this level when it is in the best interest of public health and welfare.

2. WATCH - This level will be activated when continuous air quality monitoring indicates that one of the following pollutant concentrations has been reached:

PM<sub>10</sub> - 350 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), twenty-four (24)-hour average;

SO<sub>2</sub> - 400  $\mu\text{g}/\text{m}^3$  (0.15 parts per million (ppm)), twenty-four (24)-hour average; or

O<sub>3</sub> (Ozone) - 400  $\mu\text{g}/\text{m}^3$  (0.2 ppm), one (1)-hour average;

and meteorological conditions are such that the pollutant concentrations can be expected to remain at the above levels for twelve (12) hours or more, or increase, or in the case of ozone, the situation is likely to recur within the next twenty-four (24) hours unless control actions are taken.

3. ALERT - This level indicates that air quality is continuing to deteriorate and that additional control actions are necessary. An alert will be declared when monitoring indicates that one of the following pollutant concentrations has been reached:

PM<sub>10</sub> - 420  $\mu\text{g}/\text{m}^3$ , twenty-four (24)-hour average;

SO<sub>2</sub> - 800  $\mu\text{g}/\text{m}^3$  (0.3 ppm), twenty-four (24)-hour average; or

O<sub>3</sub> (Ozone) - 800  $\mu\text{g}/\text{m}^3$  (0.4 ppm), one (1)-hour average;

and meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) hours or more, or increase, or in the case of ozone, the situation is likely to recur within the next twenty-four (24) hours unless control actions are taken.

4. EMERGENCY - The primary objective of this plan is to prevent this level from ever being reached; however, should this level be reached the most stringent control actions are necessary. An emergency will be declared when monitoring indicates that one of the following pollutant concentrations has been reached:

PM<sub>10</sub> - 500  $\mu\text{g}/\text{m}^3$ , twenty-four (24)-hour average;

SO<sub>2</sub> - 1600 µg/m<sup>3</sup> (0.6 ppm), twenty-four (24)-hour average; or

O<sub>3</sub> (Ozone) - 1000 µg/m<sup>3</sup> (0.5 ppm), one (1)-hour average;

and meteorological conditions are such that this condition can be expected to continue for twelve (12) hours or more, or increase, or in the case of ozone, the situation is likely to recur within the next twenty- four (24) hours unless control actions are taken.

5. TERMINATION - Once declared, any level reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower level will be assumed.

## **SECTION II. - EMISSION REDUCTION REQUIREMENTS**

Operators of plants emitting one-hundred (100) tons per year or more of a single pollutant, and located in a nonattainment county or a county with a nonattainment area, are required to submit written plans for meeting the required reductions of pollutants for which the county is in nonattainment. These plans must identify the air pollutant source, the approximate amount of reduction of pollutants and a brief description of the manner in which the reduction will be achieved during each level. Sources of particulate matter and sulfur dioxide have been subject to this requirement since 1972 and sources of volatile organic compounds since July 1, 1980.

### **TABLE 1 - EMISSION REDUCTION PLANS WATCH LEVEL**

#### **PART A. GENERAL**

When a Watch Level is declared, the following voluntary actions will be requested:

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

#### **PART B. SOURCE CURTAILMENT**

Persons responsible for the operation of a source of air pollutants listed below shall be advised of existing conditions and be advised to review their emission reduction plans:

1. Coal or oil-fired electric power generating plants.
2. Coal or oil-fired process steam generating plants.
3. Industrial Sources of the following classifications:

Tire Manufacturing

Bulk Gasoline Terminals

|                               |                               |
|-------------------------------|-------------------------------|
| Primary Metals Industry       | Mineral Processing Industries |
| Petroleum Refining Operations | Paper and Allied Products     |
| Chemical Industries           | Grain Industry                |
| Petroleum Storage Plants      | Surface Coating               |
| Printing                      | Degreasing Operations         |

TABLE 2 - EMISSION REDUCTION PLANS ALERT LEVEL

PART A. GENERAL

Upon declaration of an Alert Level the following will apply:

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

PART B. SOURCE CURTAILMENT

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Alert Level to include the following:

1. Coal or oil-fired electric power generating plants:
  - a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
  - b. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
  - c. Maximum reduction by diverting electric power generation to plants outside of Alert Area.
2. Coal and Oil-fired process steam generating plants:
  - a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.
  - b. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
  - c. Making ready for use a plan of action to be taken if an emergency develops.
3. Industrial sources including petroleum refining, chemical, primary metals, glass, paper, and allied products which require considerable lead time for shut-down:

a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operations.

b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or any malodorous substances.

c. Maximum reduction of heat load demands for processing.

d. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

4. Industrial sources including primary metals, chemical, mineral processing, grain, surface coating, bulk gasoline terminals, petroleum storage plants, degreasing operations, printing, and tire manufacturing which require relatively short lead times for shut-down:

a. Elimination of air pollutants 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 air pollutants from trade waste disposal processes which emit solid particles, gases, vapors or malodorous substances.

c. Maximum utilization of heat load demands for processing.

d. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

e. Maximum reduction in gasoline and petroleum products transfer.

### TABLE 3 - EMISSION REDUCTION PLANS EMERGENCY LEVEL

#### PART A. GENERAL

Upon declaration of Emergency Level the following will apply:

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

2. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.

3. All places of employment described below shall immediately cease operations:

a. Mining and quarrying of nonmetallic minerals.

b. All construction work except that which must proceed to avoid emergency physical harm.

c. All manufacturing establishments except those required to have in force an air pollution episode plan.

d. All wholesale trade establishments, that is, places of business primarily engaged in selling merchandise to retailers, or industrial, commercial, institutional or professional users, or to other

wholesalers or acting as agents in buying merchandise for or selling merchandise to such persons or companies except those engaged in the distribution of drugs, surgical supplies, and food.

e. All offices of local, county, and state government including authorities, joint meetings, and other public bodies except such agencies which are determined by the chief administrative officer of local, county, or state government, authorities, joint meetings, and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.

f. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.

g. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchangers and services; offices of insurance carriers; agents and brokers, real estate offices.

h. Wholesale and retail laundries, laundry services, and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.

i. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list, and stenographic services; equipment rental services, commercial testing laboratories.

j. Automobile repair, automobile services, garages, gasoline stations.

k. Establishments rendering amusement and recreational services including motion picture theaters.

l. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

4. All commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of air pollutants from their operation by ceasing, curtailing, or postponing operations which emit air pollutants to the extent possible without causing injury to persons or damage to equipment.

5. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

## PART B. SOURCE CURTAILMENT

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Emergency Level to include the following:

1. Coal or oil-fired electric power generating plants:

a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.

b. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

c. Maximum reduction by diverting electric power generation to plants outside of Emergency Area.

2. Coal and oil-fired process steam generating plants:

a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.

b. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.

c. Take the action called for in the emergency plan.

3. Primary metals, petroleum refining, chemical, mineral processing, grain, paper and allied products industries shall take the following control actions:

a. Elimination of air pollutants from manufacturing operations by ceasing, curtailing, postponing or deferring production and operations to the extent possible without causing injury to persons or damage to equipment.

b. Elimination of air pollutants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.

c. Maximum reduction of heat load demands for processing.

d. Maximum utilization of mid-day (12:00 p.m. (noon) to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.