

**METROPOLITAN HEALTH DEPARTMENT
DIVISION OF POLLUTION CONTROL**

**REGULATION NO. 11
EMERGENCY EPISODE REGULATION**

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EMERGENCY EPISODE REGULATION

The following Regulation is to establish criteria so as to prevent undesirable levels of air contaminants during adverse meteorological conditions. This Regulation is promulgated as provided for in Section 10.56.090, "Board - Powers and Duties," of Chapter 10.56, "Air Pollution Control," of the Metropolitan Code of Laws.

SECTION 11-1: Episode Criteria

Conditions justifying the proclamation of an air pollution alert. Air pollution warning, or air pollution emergency shall be deemed to exist whenever the Director determines that the accumulation of air pollutants is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. In making this determination, the Director will be guided by the following criteria:

- (a) **Air Pollution Forecast:** An internal watch by the Air Pollution Control Division shall be actuated by a National Weather Service advisory that an Atmospheric Stagnation Advisory is in effect or the equivalent local forecast of stagnant atmospheric condition for the Metropolitan Nashville and Davidson County region.
- (b) **Air Pollution Alert:** The alert level is that concentration of pollutants at which emission reductions must begin. An alert will be declared when any of the following levels is reached at any monitoring site:

| <u>Pollutant</u> | <u>Concentration</u> | <u>Average Interval</u> |
|-------------------------|----------------------------------|-------------------------|
| PM ₁₀ | 350 µg/m ³ | 24-hr. average |
| SO ₂ | 800 µg/m ³ (0.3 ppm) | 24-hr. average |
| CO | 17 mg/m ³ (15 ppm) | 8-hr. average |
| Ozone (O ₃) | 400 µg/m ³ (0.2 ppm) | 1-hr. average |
| NO ₂ | 1130 µg/m ³ (0.6 ppm) | 1-hr. average |
| | 282 µg/m ³ (0.15 ppm) | 24-hr. average |

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

- (c) **Air Pollution Warning:** The warning level indicates that air quality is continuing to degrade and that additional control actions are necessary. A warning will be declared when any one of the following levels is reached at any monitoring site:

| <u>Pollutant</u> | <u>Concentration</u> | <u>Average Interval</u> |
|------------------|-----------------------|-------------------------|
| PM ₁₀ | 420 µg/m ³ | 24-hr. average |

| | | |
|-------------------------|-----------------------------------|----------------|
| SO ₂ | 1,600 µg/m ³ (0.6 ppm) | 24-hr. average |
| CO | 34 mg/m ³ (30 ppm) | 8-hr. average |
| Ozone (O ₃) | 800 µg/m ³ (0.4 ppm) | 1-hr. average |
| NO ₂ | 2,260 µg/m ³ (1.2 ppm) | 1-hr. average |
| | 565 µg/m ³ (0.3 ppm) | 24-hr. average |

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

- (d) **Air Pollution Emergency:** The emergency level indicates that the air quality is continuing to degrade to a level that should never be reached and that the most stringent control actions are necessary. An emergency will be declared when any one of the following levels is reached at any monitoring site:

| <u>Pollutant</u> | <u>Concentration</u> | <u>Average Interval</u> |
|-------------------------|------------------------------------|-------------------------|
| PM ₁₀ | 500 µg/m ³ | 24-hr. average |
| SO ₂ | 2,100 µg/m ³ (0.8 ppm) | 24-hr. average |
| CO | 46 mg/m ³ (40 ppm) | 8-hr. average |
| Ozone (O ₃) | 1,000 µg/m ³ (0.5 ppm) | 1-hr. average |
| NO ₂ | 3,0000 µg/m ³ (1.6 ppm) | 1-hr. average |
| | 750 µg/m ³ (0.4 ppm) | 24-hr. average |

And meteorological conditions are such that these conditions can be expected to continue for twelve (12) or more hours, or in the case of ozone, the situation is likely to reoccur within the next 24 hours unless control actions are taken.

- (e) **Termination:** Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower status will be assumed.

SECTION 11-2: Emission reductions

- (a) When the Director has declared an air pollution alert, an air pollution warning, or an air pollution emergency, all persons must follow the requirements for that episode level as outlined in Tables 1, 2, or 3 or the air pollution episode emission reduction plan approved in accordance with paragraphs (b), (c), (d), or (e) of this Section. If a plan has been approved, emissions must be reduced to that level or lower.
- (b) Major sources must submit to the Director an acceptable air pollution episode emissions reduction plan to be followed during the alert, warning, and emergency levels of an air pollution episode. The term major source, as used in this Regulation, means any stationary source which emits or has the potential to emit, one hundred tons per year of any air pollutant.
- (c) Any source subject to Paragraph (b) must submit a revised air pollution episode emissions reduction plan at the request of the Director should the nature and quantity of the source's emissions change or the original plan be deemed inadequate.
- (d) The owners and operators of other air contaminant sources, having a smaller potential for emissions than one hundred tons per year, may file an acceptable air pollution episode emissions reduction plan for use during an air pollution episode if they feel they can contribute through other measures as much or more benefit to the reduction of the health hazard in the area at a lower cost to themselves.
- (e) Where specific actions may be necessary to relieve a health hazard by sources emitting at lower levels than that indicated in Paragraph (b) above, the Director may require the submittal of an acceptable plan from the owners or operators of that source. The owner or operator will have thirty (30) days to submit the plan, once it has been required.

TABLE 1
EMISSION REDUCTION PLANS
ALERT LEVEL

Part A. GENERAL

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

TABLE 1 (cont.)

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.

| <u>Source of Air Pollution</u> | <u>Control Action</u> |
|---|--|
| 1. Coal or oil-fired electric power generating facilities | <ul style="list-style-type: none"> a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Substantial reduction by diverting electric power generation to facilities outside of Alert Area. |
| 2. Coal and oil-fired process steam generating facilities | <ul style="list-style-type: none"> a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Substantial reduction of steam load demands consistent with continuing plant operations. |
| 3. Manufacturing industries of the following classifications: | |
| Primary Metals Industry | |
| Petroleum Refining Operations | <ul style="list-style-type: none"> a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferred production and all operations. b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or malodorous substance. |
| Chemical Industries | |
| Mineral Processing Industries | |
| Paper and Allied Products | |
| Grain Industry | <ul style="list-style-type: none"> c. Maximum reduction of heat load demands for processing. d. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing. |

TABLE 2
EMISSION REDUCTION PLANS
WARNING LEVEL

Part A. GENERAL

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

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 Warning Level.

| <u>Source of Air Pollution</u> | <u>Control Action</u> |
|--|--|
| 1. Coal or oil-fired electric power generating facilities. | <ol style="list-style-type: none"> a. Maximum reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Maximum reduction by diverting electric power generation to facilities outside of Warning Area. |
| 2. Coal and oil-fired process steam generating facilities. | <ol style="list-style-type: none"> a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content. b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing. |

TABLE 2 (cont.)

- | | |
|--|--|
| 3. Manufacturing industries which require considerable lead time for shut-down including the following classifications: | |
| Petroleum Refining | |
| Chemical Industries | |
| Primary Metal Industries | |
| Glass Industries | |
| Paper and Allied Products | |
| 4. Manufacturing industries which require relatively short lead times for shut-down including the following classifications: | |
| Primary Metal Industries | |
| Chemical Industries | |
| Mineral Processing Industries | |
| Grain Industry | |
- c. Making ready for use a plan of action to be taken if an emergency develops.
 - a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operation.
 - b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or malodorous substance.
 - c. Maximum reduction of heat load demands for processing.
 - d. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.
 - a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring and allied operations to the extent possible without causing injury to persons or damage to equipment.
 - b. Elimination of air contaminants 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 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

TABLE 3
EMISSION REDUCTION PLANS
EMERGENCY LEVELS

Part A. GENERAL

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.
3. All places of employment described below shall immediately cease operations.
 - A. Mining and quarrying of non-metallic minerals.
 - B. All construction work except that which must proceed to avoid emergent physical harm.
 - C. All air contaminant sources except those required to have in force an air pollution emergency plan.
4. Any commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of air pollutants from their operations 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 Pollution Control Division encourages the users of motor vehicles to cease usage except in emergencies.

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.

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

TABLE 3 (cont.)

| | |
|--|--|
| <p>2. Coal and oil-fired process steam generating facilities</p> | <p>c. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.</p> <p>a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.</p> <p>b. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.</p> <p>c. Taking the action called for in the emergency plan.</p> |
| <p>3. Manufacturing industries of the following classifications:</p> <p>Primary Metals Industries</p> <p>Petroleum Refining</p> <p>Chemical Industries</p> <p>Mineral Processing Industries</p> <p>Grain Industry</p> <p>Paper and Allied Products</p> | <p>a. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.</p> <p>b. Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.</p> <p>c. Maximum reduction of heat load demands for processing.</p> <p>d. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.</p> |

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