

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES**

AIR POLLUTION CONTROL REGULATION NO. 10

AIR POLLUTION EPISODES



Effective: 28 February 1972

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AUTHORITY: These regulations are authorized pursuant to R.I. Gen. Laws § 42-17.1-2(s) and 23-23, as amended, and have been promulgated pursuant to the procedures set forth in the R.I. Administrative Procedures Act, R.I. Gen. Laws Chapter 42-35.

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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10. Air Pollution Episodes

10.1 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 in any place 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 interval watch by the Office of Air Resources shall be actuated by a National Weather Service advisory that Atmospheric Stagnation Advisory is in effect or the equivalent local forecast of stagnant atmospheric condition.
- (b) "Air Pollution Alert": The Alert level is that concentration of pollutants at which first stage control action is to begin. An Alert will be declared when any one of the following levels is reached at any monitoring site:

SO₂ -- 500 ug/m³ (0.19 ppm), 24-hour average.

Particulate -- 3.0 COHs, 24-hour average.

SO₂ and Particulate Combined -- Product of SO₂ (ppm) for a 24-hour average and Particulate (COHs) for a 24-hour average equal to 0.2.

CO -- 17 mg/m³ (15 ppm), 8-hour average.

Oxidant (O₃) -- 400 ug/m³ (0.2 ppm), 1-hour average.

NO₂ -- 1130 ug/m³ (0.6 ppm), 1-hour average
282 ug/m³ (0.15 ppm), 24-hour average

and meteorological conditions are such 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.

- (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:

SO₂ -- 800 ug/m³ (0.31 ppm), 24-hour average.

Particulate -- 5.0 COHs, 24-hour average.

SO₂ and Particulate Combined -- Product of SO₂ (ppm) for a 24-hour average and Particulate (COHs) for a 24-hour average equal to 0.8.

CO -- 34 mg/m³ (30 ppm), 8-hour average.

Oxidant (O₃) -- 800 ug/m³ (0.4 ppm), 1-hour average.

NO₂ -- 2260 ug/m³ (1.2 ppm), 1-hour average
565 ug/m³ (0.3 ppm), 24-hour average.

and meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase unless control actions are taken.

- (d) "Air Pollution Emergency": The Emergency level indicates that 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:

SO₂ -- 1309 ug/m³ (0.5 ppm), 24-hour average.

Particulate -- 7.0 COHs, 24-hour average.

SO₂ and Particulate Combined -- Product of SO₂ (ppm) for a 24-hour average and Particulate (COHs) for a 24-hour average equal to 1.2.

CO -- 46 mg/m³ (40 ppm), 8-hour average.

Oxidant (O₃) -- 1200 ug/m³ (0.6 ppm), 1-hour average.

NO₂ -- 3000 ug/m³ (1.6 ppm), 1-hour average
750 ug/m³ (0.4 ppm), 24-hour average.

and meteorological conditions are such that this condition can be expected to continue for twelve (12) or more hours.

- (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.

10.2 Emission Reduction Plans

- (a) Air Pollution Alert - When the governor declares an Air Pollution Alert, any person responsible for the operation of a source of air pollutants as set forth in Table I shall take all Air Pollution Alert actions as required for such sources of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Alert.
- (b) Air Pollution Warning - When the governor declares an Air Pollution Warning, any person responsible for the operation of a source of air pollutants as set forth in Table II shall take all Air Pollution Warning actions as required for such sources of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Warning.
- (c) Air Pollution Emergency - when the governor declares an Air Pollution Emergency, any person responsible for the operation of a source of air pollutants as described in Table III shall take all Air Pollution Emergency actions as required for such sources of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Emergency.
- (d) When the governor determines that a specified criteria level has been reached at one or more monitoring sites solely because of emissions from a limited number of sources, he shall notify such source(s) that the preplanned abatement strategies of Tables I, II and III or the standby plans are required, insofar as it applies to such source(s), and shall be put into effect until the criteria of the specified level are no longer met.

10.3 Preplanned Abatement Strategies

- (a) Any person responsible for the operation of a source of air pollutants as set forth in Tables III shall prepare standby plans for reducing the emissions of air pollutants during periods of an Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Standby plans shall be designed to reduce or eliminate emissions of air pollutants in accordance with the objectives set forth in Tables I-III which are made a part of this section.
- (b) Any person responsible for the operation of a source of air pollutants not set forth under Section 10.3(a) shall, when requested by the director in writing, prepare standby plans for reducing the emission of air pollutants during periods of an Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Standby plans shall be designed to reduce or

eliminate emissions of air pollutants in accordance with the objectives set forth in Tables I-III.

- (c) Standby plans as required under Section 10.3(a) and 10.3(b) shall be in writing and identify the sources of air pollutants, the approximate amount of reduction of pollutants, and a brief description of the manner in which the reduction will be achieved during an Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency.
- (d) During a condition of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency, standby plans as required by this section shall be made available on the premises to any person authorized to enforce the provisions of applicable rules and regulations.
- (e) Standby plans as required by this section shall be submitted to the director upon request within thirty (30) days of the receipt of such request; such standby plans shall be subject to review and approval by the director.

If, in the opinion of the director, a standby plan does not effectively carry out the objectives as set forth in Tables III, the director may disapprove it, state his reason for disapproval and order the preparation of an amended standby plan within the time period specified in the order.

TABLE I - ABATEMENT STRATEGIES EMISSIONS REDUCTION PLAN

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 noon and 4 PM.
3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 PM.
4. Persons operating motor vehicles should eliminate all unnecessary operations.

PART B. SOURCE CURTAILMENT

Any persons responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Alert Level.

Source of Air Pollution	Control Action
1. Coal or oil-fired electric power generating facilities	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 PM) 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	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 PM) atmospheric turbulence for boiler lancing and soot blowing. c. Substantial reduction of steam load demands consistent with continuing plant operations.

Source of Air Pollution	Control Action
<p>3. Manufacturing industries of the following classifications:</p> <p>Primary Metals Industry Petroleum Refining Operations Chemical Industries Mineral Processing Industries Paper and Allied Products Grain Industry</p>	<p>a. Substantial reduction of air pollution from manufacturing operations by curtailing, postponing or deferring production and all operations.</p> <p>b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gas vapors or malodorous substances.</p> <p>c. Maximum reduction of heat load demands for processing.</p> <p>d. Maximum utilization of mid-day (12 noon to 4 PM) atmospheric turbulence for boiler lancing or soot blowing.</p>

TABLE II - 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 noon and 4 PM.
4. Persons operating motor vehicles must 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 Warning Level.

Source of Air Pollution	Control Action
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 noon to 4 PM) atmospheric turbulence for boiler lancing and soot blowing. c. Maximum reduction by diverting electric power generation to facilities outside of Warning Area.

Source of Air Pollution	Control Action
<p>2. Coal and oil-fired process steam generating facilities</p>	<p>a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.</p> <p>b. Maximum utilization of mid-day (12 noon to 4 PM) atmospheric turbulence for boiler lancing and soot blowing.</p> <p>c. Making ready for use a plan of action to be taken if an emergency develops.</p>
<p>3. Manufacturing industries which require considerable lead time for shut-down including the following classifications:</p> <p>Petroleum Refining Operations Chemical Industries Primary Metals Industries Glass Industries Paper and Allied Products</p>	<p>a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operation.</p> <p>b. Maximum reduction by deferring trade waste disposal operations 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 noon to 4 P.M.) atmospheric turbulence for boiler lancing or soot blowing.</p>
<p>4. Manufacturing industries require relatively short lead times for shut-down including the following classifications:</p> <p>Primary Metals Industries Chemical Industries Mineral Processing Industries Grain Industry</p>	<p>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.</p> <p>b. Elimination of air pollutants 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 noon to 4 P.M.) atmospheric turbulence for boiler lancing or soot blowing.</p>

TABLE III - EMISSION REDUCTION PLANS

EMERGENCY 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 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 emergent physical harm.
 - c. All manufacturing establishments except those required to have in force an air pollution emergency plan.
 - d. All wholesale trade establishments, i.e. 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 excepting 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, exchanges 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.
 - k. Establishments rendering amusement and recreational services including motion picture theaters.

1. 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.

Source of Air Pollution	Control Action
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 noon to 4 PM) atmospheric turbulence for boiler lancing and soot blowing. c. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.
2. Coal and oil-fired process steam generating facilities	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage. b. Maximum utilization of mid-day (12 noon to 4 P.M.) atmospheric turbulence for boiler lancing and soot blowing. c. Taking the action called for in the emergency plan.

Source of Air Pollution	Control Action
<p>3. Manufacturing industries of the following classifications:</p> <p>Primary Metals Industries Petroleum Refining Chemical Industries Mineral Processing Industries Grain Industry Paper and Allied Products</p>	<p>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.</p> <p>b. Elimination of air pollutants 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 noon to 4 P.M.) atmospheric turbulence for boiler lancing or soot blowing.</p>