

1100 Air Quality Management Section

1115 Air Pollution Alert and Emergency Plan

07/17/1984

1.0 General Provisions

- 1.1 Air Pollution Emergency Plans are required to assure that during adverse weather conditions air contaminants in the atmosphere shall not increase in concentration to a degree that would be detrimental to the health, welfare and safety of the population.
- 1.2 Whenever the Department determines that the conditions of 2.0 of this regulation have been met at any single air quality monitoring station in the State of Delaware, the applicable stage of this plan shall be declared by the Department for that Air Quality Region in which the monitoring station is located.
- 1.3 To assure compliance with this regulation, sources designated by the Department shall submit standby plans in accordance with 4.0 of this regulation.

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2.0 Stages and Criteria

- 2.1 Air Pollution Watch - An Air Pollution Watch shall be activated by the Department when the National Weather Service issues an Air Stagnation Advisory which includes areas of the State of Delaware or when the Department Meteorologist forecasts an air stagnation period for the State, and when such air stagnation is forecast to continue for the next 36 hours.
- 2.2 Alert-Stage I - An Alert-State I status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional 12 hours:
 - 2.2.1 The six-hour average concentration of sulfur dioxide is equal to or exceeds 0.30 parts per million.
 - 2.2.2 The 24-hour average of total suspended particulates is equal to or exceeds 375 $\mu\text{g}/\text{m}^3$.
 - 2.2.3 The product of the 24-hour average ambient air concentration of sulfur dioxide in $\mu\text{g}/\text{m}^3$ and the 24-hour average total suspended particulates in $\mu\text{g}/\text{m}^3$ is equal to or exceeds 65×10^3 .
 - 2.2.4 The 24-hour average of PM_{10} is equal to or exceeds 350 $\mu\text{g}/\text{m}^3$.
- 2.3 Alert-Stage II - An Alert-Stage II status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional 12 hours.
 - 2.3.1 The six-hour average concentration of sulfur dioxide is equal to or exceeds 0.50 parts per million.
 - 2.3.2 The 24-hour average of total suspended particulates is equal to or exceeds 625 $\mu\text{g}/\text{m}^3$.

- 2.3.3 The product of the 24-hour average ambient air concentration of sulfur dioxide in $\mu\text{g}/\text{m}^3$ and the 24-hour average total suspended particulates in $\mu\text{g}/\text{m}^3$ is equal to or exceeds 261×10^3 .
- 2.3.4 The four-hour average concentration of ozone is equal to or exceeds 0.25 parts per million.
- 2.3.5 The 24-hour average concentration of nitrogen dioxide is equal to or exceeds 0.30 parts per million.
- 2.3.6 The eight-hour average of carbon monoxide is equal to or exceeds 30.0 parts per million.
- 2.3.7 The 24-hour average of PM_{10} is equal to or exceeds $420 \mu\text{g}/\text{m}^3$.
- 2.4 Alert-Emergency Stage - An Alert-Emergency Stage status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional 12 hours.
- 2.4.1 The 24-hour average concentration of sulfur dioxide is equal to or exceeds 0.60 parts per million.
- 2.4.2 The 24-hour average of total suspended particulates is equal to or exceeds $875 \mu\text{g}/\text{m}^3$.
- 2.4.3 The product of the 24-hour average ambient air concentration of sulfur dioxide in $\mu\text{g}/\text{m}^3$ and the 24-hour average concentration of total suspended particulates in $\mu\text{g}/\text{m}^3$ is equal to or exceeds 393×10^3 .
- 2.4.4 The eight-hour average concentration of carbon monoxide is equal to or exceeds 40.0 parts per million.
- 2.4.5 The four-hour average concentration of ozone is equal to or exceeds 0.35 parts per million.
- 2.4.6 The 24-hour average concentration of nitrogen dioxide is equal to or exceeds 0.40 parts per million.
- 2.4.7 The 24-hour average of PM_{10} is equal to or exceeds $500 \mu\text{g}/\text{m}^3$.
- 2.5 Termination - Once declared, any status reached by application of the criteria will remain in force until the criteria for that status are no longer met. At such time the applicable lower status shall be declared. Termination shall be declared when concentrations are less than Stage I and a weather advisory has been received that the air stagnation period is ended.

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3.0 Required Actions

- 3.1 Air Pollution Watch - The Department shall initiate an increased continuous watch of the air quality values at the air quality monitoring stations and shall inform the public and major industries of the situation.
- 3.2 Alert-Stage I
- 3.2.1 There shall be no open burning by any person;

- 3.2.2 The use of incinerators for the disposal of solid or liquid waste shall be limited to the hours specified by the Department, and plans for the alternate disposal methods will be formulated;
 - 3.2.3 Persons operating fuel burning equipment which requires boiler lancing and soot blowing shall perform such operation only between the hours specified by the Department.
 - 3.2.4 Any person responsible for the operation of a source of air contamination as set forth in Table 3-1 of this regulation shall take all Air Pollution Alert-Stage I actions as required for such source of air contamination, and shall particularly put into effect the standby plans for Alert-Stage I status.
- 3.3 Alert-Stage II
- 3.3.1 There shall be no open burning by any person;
 - 3.3.2 The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited;
 - 3.3.3 Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours specified by the Department;
 - 3.3.4 Any person responsible for the operation of a source air contamination as set forth in Table 3-2 of this regulation, shall take all Air Pollution Alert-Stage II actions as required for such source of air contamination; and shall particularly put into effect the standby plans for Alert-Stage II status.

**TABLE 3-1
EMISSION REDUCTION OBJECTIVES**

Source	Alert - Stage I
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 atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.
	c. Substantial reduction by diverting electric power generation to facilities outside an Alert Area.
2. Coal or oil-fired generating facilities having a capacity to burn in excess of four tons of coal or 600 gallons of oil per hour.	a. Substantial reduction by utilization of fuels having low ash and sulfur content.
	b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.
	c. Substantial reduction of steam load demands consistent with continuing plant operations.

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<p>3. A. Manufacturing industries of the following classifications which employ twenty employees at one location: Primary Metals, Petroleum, Refining & Related Chemical and Allied Products, Plastic, Paper & Allied Products, Glass, Clay and Hot Mix Plants</p> <p style="text-align: center;">AND</p> <p>B. Other persons required by the Department to prepare plans.</p>	a. Substantial reduction of air contaminants for manufacturing operations by curtailing, postponing or deferring production and allied operations.
	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.
	c. Maximum reduction of heat load demands for processing.
	d. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.

**TABLE 3-2
EMISSION REDUCTION OBJECTIVES**

Source	Alert - Stage II
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 atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.
	c. Maximum reduction by diverting electric power generation to facilities outside an Alert Area.
2. Coal or oil-fired generating facilities having a capacity to burn in excess of four tons of coal or 600 gallons of oil per hour.	a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.
	b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.
	c. Making ready for use a plan of action to be taken if an emergency develops.
<p>3. A. Manufacturing industries of the following classifications which employ twenty employees at one location: Primary Metals, Petroleum, Refining & Related Chemical and Allied Products, Plastic, Paper & Allied Products, Glass, Clay and Hot Mix Plants</p> <p style="text-align: center;">AND</p> <p>B. Other persons required by the Department to prepare plans.</p>	a. Maximum reduction of air contaminants for manufacturing operations by, if necessary, assuming economic hardships by postponing production and allied operations.
	b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances.
	c. Maximum reduction of heat load demands for processing.
	d. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.

- 3.4.4.4 All offices of local, county, and state government including authorities, joint meetings and any other public body, except to the extent that such offices must continue to operate in order to enforce the requirements of this order pursuant to statute;
 - 3.4.4.5 All retail trade establishments except pharmacies and stores primarily engaged in the sale of food;
 - 3.4.4.6 Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges, and services; offices of insurance carriers, agents and brokers, real estate offices;
 - 3.4.4.7 Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios, beauty shops, barber shops; shoe repair shops;
 - 3.4.4.8 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;
 - 3.4.4.9 Automobile repair, automobile services, garages;
 - 3.4.4.10 Establishments rendering amusement and recreation services including motion picture theatres.
 - 3.4.4.11 Elementary and secondary schools, junior colleges, vocational schools, and public and private libraries.
- 3.4.5 The use of motor vehicles is prohibited except in emergencies as determined by local and state police and the Department;
- 3.4.6 All other manufacturing establishments not mentioned in 3.4.1 through 3.4.5 of this regulation will institute such actions as will reduce air contaminants from their operation by ceasing or curtailing operations which emit air contaminants to the maximum extent possible without causing injury to persons or serious damage to equipment.

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4.0 Standby Plans

- 4.1 Any person responsible for the operation of a source of air contamination set forth in Table 3-1 of this regulation or, any person when requested by the Department in writing, shall prepare standby plans, consistent with good industrial practice and safe operating procedures, for reducing the emission of air contaminants into the ambient air during periods of an Alert-Stage I and II and Alert-Emergency Stage. Standby plans shall be designed to reduce or eliminate emissions of air contaminants into the outdoor atmosphere in accordance with the objectives set forth in Tables 3-1, 3-2, and 3-3 of this regulation and shall be approved by the Department.
- 4.2 Standby plans, as required under 4.1 of this regulation, shall be in written form and show the location of the source of air contamination, the approximate amount of reduction of contaminants, and a brief description of the manner in which the reduction will be achieved during Alert-Stages I and II and Alert-Emergency Stage.
- 4.3 Standby plans, as required by 4.0 of this regulation, shall be submitted to the Department upon request within 30 days of the receipt of such request. If, in the opinion of the Department, any

standby plan does not effectively carry out the objectives as set forth in Table 3-1, 3-2 and 3-3 of this regulation, the Department may disapprove said plan, state the reason for disapproval and order the preparation of an amended standby plan within the time specified in the order.

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