

5. PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

5.1 INTRODUCTION

For the purpose of preventing air pollution emergency episodes, as required by Section 420.16 of the Requirements for Preparation, Adoption, and Submittal of Implementation Plans, regulations have been adopted as R23-25-11 of Regulation No. 23-25, the North Dakota Air Pollution Control Regulations (formerly Regulation No. 82). This regulation specifies three stages of episode criteria, provides for public announcement whenever any episode stage has been determined to exist, and specifies emission control actions to be taken at each stage. R23-25-11 of Regulation No. 23-25 is attached in Appendix C.

5.2 EPISODE CRITERIA

Three stages of episode criteria at which control actions are to begin are specified in R23-25-11, Section 11.200 of Regulation No. 23-25. They are Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Also included are an internal Air Pollution Forecast stage and also a Termination stage. Each episode stage is made up of concentration levels for sulfur dioxide, particulate matter, sulfur dioxide and particulate matter combined, carbon monoxide, oxidant (O₃), and nitrogen dioxide. The episode criteria adopted are same as the example criteria of Appendix L of the Requirements for the Preparation, Adoption, and Submittal of Implementation Plans.

5.3 PUBLIC ANNOUNCEMENT

When concentrations of air contaminants reach any of the episode stage levels, the Department will declare the appropriate Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency. The Department will be in direct contact with the following organizations:

1. Legal Authorities
2. Emission Sources
3. Air Quality Data Sources
4. Meteorological Data Sources
5. Environmental Protection Agency
6. Air Pollution Control Agencies of Minnesota, Montana, and South Dakota
7. Other State and Local Government Departments
8. Hospitals
9. Telephone Companies
10. News Media

A Communications Manual will be developed to simplify the procedure of communicating with the organizations listed above. The Manual will specify the operations to be followed by each member of the Department staff at each episode stage. A series of prepared press releases will be included in the Manual for immediate release during the early stages of an episode. Procedures for publicizing these messages and other specially prepared announcements will be clearly presented.

The Communications Manual will be completed by ~~May 30, 1973~~ ^{July 1, 1974}.

5.4 EPISODE SURVEILLANCE

5.4.1 AIR QUALITY MONITORING

During episodes, short-period averages of air quality measurements will be available from two fixed emergency episode sampling stations described in Section 6. One station will be located in Region No. 130 in Fargo and one will be located in Region No. 172 in Bismarck.

Paper tape samplers will be used to provide soiling measurements at the two emergency episode sampling stations. They will be equipped with recorders for real-time measurements and easier retrospective analysis. Normal sequential sampling interval will be two hours; however, the sampling time will be reset for hourly or half-hourly intervals when ambient concentrations are high during episodes.

Concentrations of suspended particulates will be measured by high-volume samplers, one at each emergency episode sampling station. During non-episode periods, the high-volume samplers will take a 24-hour, midnight-to-midnight sample every six days. During episodes they will be operated daily. High-volume samplers at the other air sampling network sampling stations will be operated more frequently as needed during episodes.

Sulfur dioxide pararosaniline bubblers will be used at the two emergency episode sampling stations to provide sulfur dioxide measurements. During non-episode periods the sulfur dioxide bubblers will take a 24-hour, midnight-to-midnight sampler every six days. During episodes they will be operated daily.

Standby sampling equipment will be maintained at the State Department of Health Laboratory in Bismarck for use in other areas of the State during episodes. This equipment will consist of one paper tape sampler; one sulfur dioxide 24-hour bubbler; three sequential samplers for sulfur dioxide, oxidants, nitrogen dioxide; and a carbon monoxide sampler using MSA detector tubes. A Chevrolet Corvair van will be maintained and equipped for transporting and operating this equipment at any location in the State.

The air quality monitoring equipment will be operational by ~~January 1, 1973~~.

^{May 30, 1973}

5.4.2 METEOROLOGICAL MONITORING

During episode periods predictive and observational weather information for the State will be obtained from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service Forecast Office, located in Minneapolis, Minnesota; ~~the State Climatologist, located at North Dakota State University in Fargo~~; and from the Weather Bureau stations located in the State. Arrangements will be made with the National Weather Service Forecast Office, ~~the State Climatologist~~, and the Weather Bureau stations in the State to receive forecasts of atmospheric stagnation conditions when they occur and during episodes as needed.

5.4.3 SOURCE INSPECTION

Under episode conditions, it will be necessary to ascertain that the Emission Reduction Plan described in 5.5 is being executed. The available tools and procedures to exercise this function are the same as those used in normal operations (see Section 8 of the Implementation Plan) except that emphasis will be placed on quick action and rapid response measures.

5.5 EMISSION REDUCTION PLAN

Abatement Strategies Emission Reduction Plans for Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency levels have been adopted as Section 11.300 of R23-25-11 of Regulation No. 23-25, the North Dakota Air Pollution Control Regulations. These plans are essentially the same as the example plans of Appendix L of the Requirements for the Preparation, Adoption and Submittal of Implementation Plans.

A detailed procedural plan to implement the Abatement Strategies Emission Reduction Plans adopted will be developed. Attention will be first given to particulate emissions because the State is classified Priority II for particulates. Sulfur dioxide will be handled next and then the other contaminants, if needed. The detailed procedural plan for particulates and sulfur dioxide will be completed by ~~May 30, 1973~~.

July 1, 1974

5.6 EPISODE LEGAL AUTHORITY

Legal authority for the implementation of emergency action is provided by Chapter 23-25, Section 23-25-08 and Section 23-25-09 of the North Dakota Century Code. The discussion of emergency legal authority is presented in Section 2 of the Implementation Plan.