

oxide concentrations in some of these cities are also presented. Pollutant concentration is related to city size and distance from city center. Sulfate particulate concentration is related to sulfur dioxide concentration. Pollutant concentrations are discussed in terms of relative effects and absolute units. Means are presently available or are being developed to control the emission of all these pollutants except the nitrogen oxides, which come from all combustion sources. There is no known easy method for controlling nitrogen oxides. In the decades ahead, the ultimate solution to pollution from the nitrogen oxides as well as the other pollutants may be the use of much less high-temperature combustion, in homes, vehicles, and industry. Fuel cells and atomic fission or fusion might then power the nation electrically.

-- Author's summary

- 508 Air Pollution. The Human Problem. Mary Catterall.
Smokeless Air (London) 34, 142-148 (1963).

As industry spreads there are indications that bronchitis and lung cancer are increasing. The effects of air pollution on the urban population, and the respiratory system in relation to the influence of air pollution on bronchitis and cancer of the lung, and the psychological effects of air pollution are discussed. The correlation between lung diseases and air pollution by industry, domestic chimneys, and cigarette smoke is of importance to the human race and especially in the densely populated areas.

-- APCA Absts.

- 509 Meteorology and Air Pollution Problems in Industry. G.V. Williamson.
J. Air Poll. Control Assn. 14, 78-79 (March, 1964).

Quite properly the field of air pollution has been designated by meteorologists to that of applied micrometeorology. A meeting of minds between those in industry and meteorologists, cannot help but be of truly significant help in our efforts for clean air. The value of a great deal of meteorological work, however, will be limited unless it is applicable to community problems, and unless it is couched in terms understandable to reasonably proficient managers in industry. The meteorologist will advance the cause as a whole if his reports of research, and in fact all studies and reports, be couched or translated into commonly understood terms. Isn't "daily" just as accurate description of a certain kind of temperature inversion as "diurnal?" Industry's studies of its air environment then, may well come to call upon the applied micrometeorologist more and more. With mutual understanding there is good promise of advancing toward further improvement in industry's relations to problems of the air.

- 510 Meteorological Tools for Air Pollution Control. M.E. Smith.
J. Air. Poll. Control Assn. 14, 80-82 (March, 1964).

Examination of the meteorological tools available for air pollution studies leads to the conclusion that important advances have been made in the utilization of meteorological knowledge in this field. This has come about largely through numerous field studies providing empirical data, and rapid development of automatic processing and computing. Data for such studies, both current and past, can sometimes be obtained at least partially from U.S. Weather Bureau sources, although most installations require some local environmental study. Instruments and techniques for the latter are readily available, at least insofar as general background data are concerned. Important deficiencies lie in the number of trained personnel now in the field and anticipated for the future. The practical knowledge of the profession needs expansion and clarification, especially in respect to deposition and terrain problems. Finally, more effort needs to be expended in providing instrumentation for direct measurement (or conversion) of parameters necessary in air pollution studies.

-- Author's summary

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