

mean that the local transboundary transport of air pollution is insignificant, but merely to indicate that the Work Group thought that sufficient information is available in the literature to allow a user to select an appropriate local model to fit a particular application.

An excellent model review paper, Turner (1979), provides a historical perspective of atmospheric dispersion models, many references to particular models, and includes an appendix that lists those models contained in the "User's Network for Applied Modeling of Air Pollution" (UNAMAP). Turner's review paper is commented on by peers in a later paper (Egan et al., 1979). A more recent model survey by Liu et al. (1982) includes an evaluation of existing atmospheric dispersion models appropriate for estimating air pollution concentrations from elevated point sources. Thirty existing plume models were evaluated and analyzed. These consisted of 19 kinematic models, 9 first-order-closure models, and 2 second-order-closure models. The model formulation and the technical attributes of each of the 30 plume models are compared and examined for differences and similarities. A sensitivity analysis was carried out on the Gaussian plume models to explore systematically what effect varying the different algorithms would have on the overall model predictions. This sensitivity analysis will assist a user in deciding which model is most appropriate for a particular application. References to the models are given at the end of each section on the specific model types.

A steering committee, made up of United States scientists, which was organized through a cooperative agreement between the U.S. Environmental Protection Agency (EPA) and the American Meteorological Society, reviewed EPA's local dispersion models and modeling procedures. The steering committee report (American Meteorological Society, 1981) may be considered representative of current opinions on application of local models. The report recommends: (1) that EPA strongly endorse the use of atmospheric dispersion models for assistance in making decisions related to the management of air quality; (2) that EPA continue to enhance research and development activities to increase our understanding of the following topics (not listed in order of priority):