Zephyr Environmental Corporation

Dispersion Modeling

Perceived by many as more of an art than a science, atmospheric dispersion modeling plays a central role in the assessment of air quality impacts from new and modified sources. Zephyr's air pollution meteorologists have worked with dispersion models since the late 1960's — even before any of today's recommended models were conceived.

Over the years, we have been instrumental in advancing the state of the science through the refinement of existing models and the development and testing of new ones. In fact, our team includes some of the same people who wrote and tested the computer code that is the heart of AERMOD — one of EPA's most versatile dispersion model workhorses. Also, we have frequently been called on to provide training in the theory and use of dispersion models.

Our hands-on familiarity with all aspects of modeling positions Zephyr to correctly match the appropriate model to your specific need, to properly interpret the results, and to advise you on the most effective actions to ensure compliance with state and federal air quality standards.

ZEPHYR UNDERSTANDS DISPERSION MODELING

Zephyr is equipped to help you in the application of a wide spectrum of dispersion models currently used in the regulatory permitting, risk and hazards assessment, environmental impact assessment, and litigation contexts, such as: AERMOD, CALPUFF, BLP, CALINE, SCREEN3, CTSCREEN, VISCREEN, SLAB and ALOHA/CAMEO. In the application of dispersion models we have investigated a variety of complex and challenging scenarios for projects worldwide, including:

- NAAQS, PSD increment, state air quality standard, and air toxics impacts assessments
- Evaluation of long-range pollutant transport and its impacts on air quality, visibility, and acid deposition in Federal Class I areas such as national parks or wilderness areas
- Accidental release and dense gas dispersion modeling
- Building and structure wake effects evaluations
- Good engineering practice stack height evaluations
- Simple and complex terrain modeling
- Toxics/health effects modeling
- Air quality control plan modeling
- Dispersion at the land-sea interface
- Development of air quality monitoring plan development
- Evaluation of air quality monitoring data in air quality permitting, source compliance, and NAAQS attainment demonstrations

In addition to our technical capabilities, we are skilled in effectively communicating modeling results to our clients, to students, to regulators, and to juries in straightforward, layman's terms.

Assisting clients worldwide with their EHS consulting, training, and data systems needs.

zephyr

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