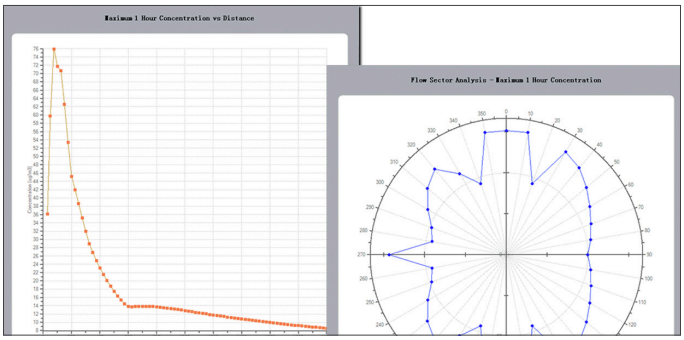
BREEZE AERSCREEN

Air Dispersion Screening Model Based on AERMOD

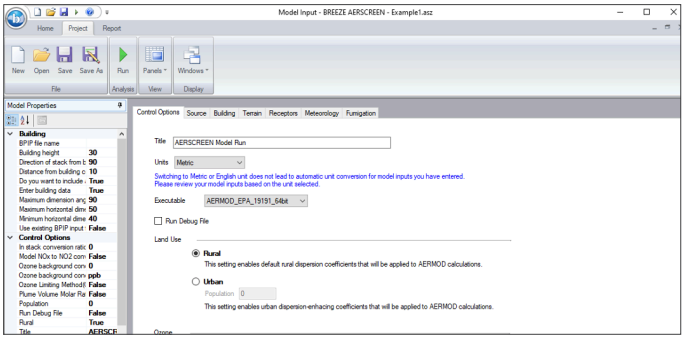
BREEZE AERSCREEN is a screening model based on the U.S. EPA (U.S. Environmental Protection Agency) AERMOD air quality dispersion model and is compatible with the BREEZE AERMOD modeling system. It will produce estimates of "worst-case" 1-hour concentrations for a single source, without the need for hourly meteorological data. BREEZE AERSCREEN also includes conversion factors to estimate "worst-case" 3-hour, 8-hour, 24-hour, and annual concentrations. These concentration estimates are intended to be equal to or greater than the estimates produced by AERMOD with a fully developed set of meteorological and terrain data, however the degree of conservatism will vary depending on the application.



Key Features

BREEZE AERSCREEN includes many time-saving features and tools to help streamline the model setup and results analysis process:

- Incorporates the latest U.S. EPA AERMOD executable and U.S. EPA AERMAP executable
- Adds an option for 64-bit operating system users to select between running the 64-bit or 32-bit version of AERMOD
- Continued support for earlier AERMOD executables
- Models a single source: point/stack (vertical, horizontal, capped), area (rectangular, circular), volume, flare
- Automates receptor arrays
- Automates BPIP model setup, execution, and importing
- Calculates maximum 1-hour concentration at each modeled receptor
- Conversion factors to estimate "worst-case" 3-hour, 8-hour, 24-hour, and annual concentrations
- Models single or multiple buildings
- Measures in English or Metric units
- Intuitive, user-friendly interface that walks users through setting up their modeling scenario
- Includes a diagnostic window that notifies users of potential problems during their model setup as well as the location where the potential issue can be resolved, saving users time and effort
- Built-in "smart" file naming so users never overwrite results again
- Compatible files for post-processing and plotting high values in BREEZE 3D Analyst
- Exports tabular results in Microsoft Excel format
- Exports charts to .bmp, .jpg, or .png formats



Model Setup and Execution

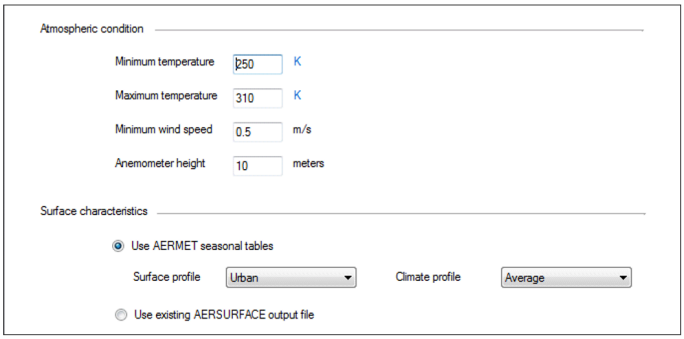
BREEZE AERSCREEN is a simple to use, intuitive screening air quality modeling system designed to streamline the setup, execution, and analysis of a scenario without the complications associated with data entry via a DOS command prompt window. All of the model setup is conveniently done in a series of data entry tabs or in a model properties panel, and a diagnostics panel displays informational messages, warnings, and errors alerting users to potential problems with the scenario. Each message is preceded by a visual indicator to identify the severity of the alert. While informational and warning messages will not necessarily prevent a scenario from successfully completing, error messages indicate that if the run is executed, it will fail. Clicking on a message will take the user to the location within the application that triggered the message where the user can look into the matter and resolve it if needed. This unique feature serves as a convenient QA/QC step during the model setup and saves users time and money.

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Meteorology

Entering meteorological data into BREEZE AERSCREEN takes only a matter of seconds. The user can either opt to use a built-in matrix of worst-case meteorological conditions or input specific meteorological conditions. Additionally, for the surface characteristics, users can use AERMET seasonal tables, upload an existing AERSURFACE output file, or use user-defined values.

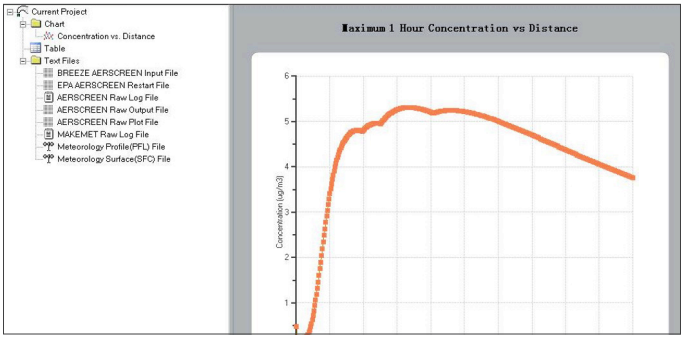


Model Objects

In BREEZE AERSCREEN, information on the source, receptors, and buildings are entered in the respective tabs. For the source, users have the option to choose from a variety of source types and customize the properties accordingly. The receptors may be customized as well, giving the option of using flagpole receptors should users choose. A unit conversion option is also available when entering discrete receptor distances, making it easy to alternate between different units. AERSCREEN allows one building to be included in a run and users can either enter the different dimensions of the building or upload an existing BPIP input file. When a building is included in AERSCREEN, the program will seamlessly and automatically calculate the impact of airflow over and around the building on the pollutant plume exiting the source. For more information about the model objects, please download the product brochure.

Results Analysis

BREEZE AERSCREEN provides multiple graphical and tabular results options to facilitate both analysis and documentation. The results from each model run can be displayed in three different formats: chart, table, and text file. The charts include a concentration vs. distance line



graph, a flow sector analysis of the concentration, and a flow sector analysis of the impact distance. To see examples of these output options, download the product brochure.

Visit trinityconsultants.com/software/dispersion/aerscreen to learn more about BREEZE AERSCREEN. For a software demonstration, contact us at +1 972.661.8881 or breeze@trinityconsultants.com.

trinityconsultants.com/software
P +1 972.661.8881 / F +1 972.385.9203
breeze@trinityconsultants.com

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