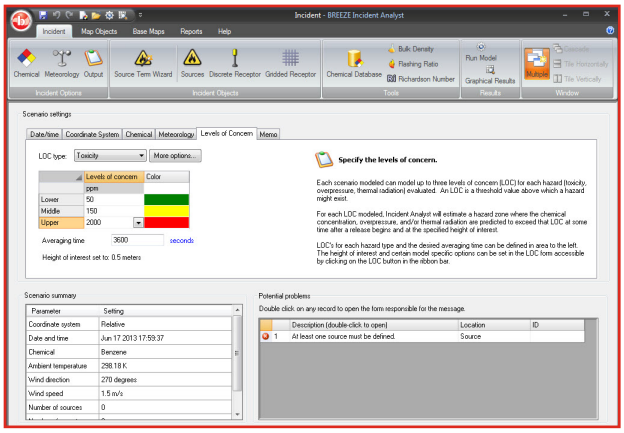
Incident Analyst

BREEZE® Incident Analyst incorporates a suite of industry-standard neutrally buoyant and dense toxic gas dispersion models to predict chemical concentration and flammability levels; thermal radiation fire models to predict radiation fluxes and temperature rise; and explosion models to predict blast force overpressures from vapor cloud explosions.



BREEZE Incident Analyst provides many powerful modeling tools in an intuitive user-interface.

BREEZE Incident Analyst includes the following toxic dispersion, fire, and explosion models:

- DEGADIS
- SLAB
- INPUFF
- AFTOX
- Confined & Unconfined Pool Fire
- BLEVE
- U.S. Army TNT Equivalency
- U.K. HSE TNT Equivalency
- TNO Multi-Energy
- Baker-Strehlow

In addition to the technical capabilities, *BREEZE* Incident Analyst is easy to use and quick to run. An intuitive interface guides the user through entering required and optional inputs associated with a potential chemical release (e.g., size and position of tank rupture, shape of storage tank, spill volume, and existence of an impoundment basin), and selecting the appropriate algorithms. Results are provided in both tabular and graphical formats including 2D contour, 3D volume, and time-series charts.

Chemical Database

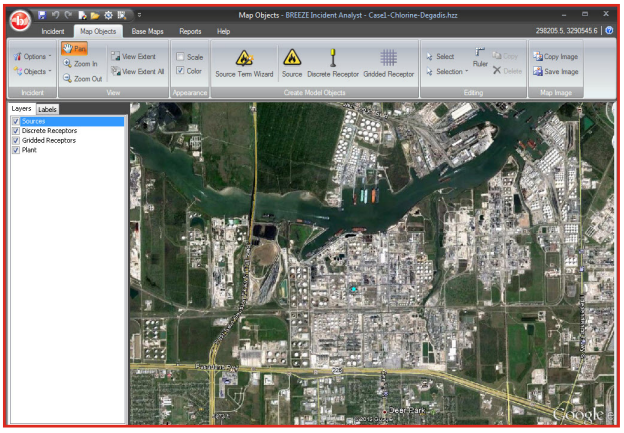
BREEZE Incident Analyst includes a robust chemical database, containing essential information needed by its multiple models for over 150 chemicals. Chemicals and chemical mixtures can easily be added or modified. From physical characteristics, such as boiling point and critical pressure, to exposure hazard levels, such as Immediately Dangerous to Life and Health (IDLH) concentration, Incident Analyst's database saves users time when searching for data.

Source Term Wizard

The powerful Source Term Wizard automatically calculates the release properties to recommend an appropriate dispersion model for your scenario. Whether you are modeling an accident in real-time or just trying to get your everyday work done faster, the assistance of the Source Term Wizard is a major asset.

Maps

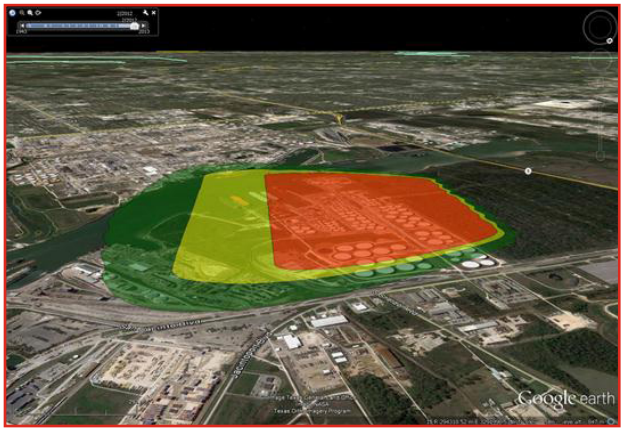
The point-and-click interface of *BREEZE* Incident Analyst allows users to effortlessly add objects to their modeling runs through the Map tab. Additionally, model results can be quickly and easily output to Google Earth.



Add sources using the drawing tools under the Map Objects tab for the precise placement of sources.

Results Tab and BREEZE 3D Analyst Integration

BREEZE Incident Analyst includes a robust set of model outputs. A Results Summary file provides a quick look at the most critical results. Incident Analyst is fully integrated with the *BREEZE* 3D Analyst program and provides a wealth of options for visualizing results including image results overlaid on a map, animated results, or export results to Google Earth, Surfer, ArcGIS shapefiles, or scalable vector graphics (SVG) files.



Integrated with BREEZE 3D Analyst to seamlessly plot model results to Google Earth.

Dispersion Models

BREEZE Incident Analyst includes four dispersion models for analyzing accidental releases of toxic chemicals. The program is ideal for emergency response and planning as well as modeling accidental release scenarios for regulatory programs like the U.S. EPA's Risk Management Program (RMP).

DEGADIS – estimates concentrations downwind from an accidental chemical release where the dispersing toxic or flammable substance is initially heavier than air.

SLAB – dense gas dispersion model that is used to estimate pollutant concentrations downwind from an accidental chemical release.

INPUFF – Gaussian puff model that simulates the atmospheric dispersion of neutrally buoyant or buoyant chemical releases from vertical stack or jet sources.

AFTOX – Gaussian puff/plume dispersion model that estimates concentrations downwind from accidental chemical releases where the dispersing plume has the same density as air.

Explosion Models

If a quantity of flammable material is released, it will mix with the air and may result in a flammable vapor cloud. If this flammable vapor cloud finds an ignition source, a vapor cloud explosion may result. *BREEZE* Incident Analyst includes four explosion models for these vapor cloud explosion scenarios.

U.S. Army TNT Equivalency – uses a proportional relationship between the flammable mass in the cloud and an equivalent weight of TNT and assumes the entire flammable mass is involved in the explosion and is centered at a single location.

U.K. HSE TNT Equivalency – uses a proportional relationship between the flammable mass in the cloud and an equivalent weight of TNT.

TNO Multi-Energy – treats the explosive potential of the vapor cloud as a corresponding number of equivalent fuel-air charges.

Baker-Strehlow – accounts for variability in blast strength by simulating the explosion as a number of fuel-air charges, each with individual characteristics. It also accounts for the degree of confinement, flame speed, ground reflection, and the number of directions in which the blast can expand.

Fire Models

BREEZE Incident Analyst models a wide range of conditions using three fire models. These models can calculate the thermal radiation level produced by the fire, including the radius within which a specified radiation level will be exceeded.

Confined Pool Fire – models a fire that occurs when liquid is ignited in a confined area such as a dike or a tank.

Unconfined Pool Fire – models a fire that occurs when an unconfined spreading pool of liquefied fuel gas ignites.

BLEVE – thermal radiation model simulates a fire that may result from the leak or rupture of a pipeline containing a compressed or liquefied gas under pressure.

Visit **breeze-software.com/IncidentAnalyst** to learn more.

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