



Release Notes

BREEZE Incident Analyst 1.4

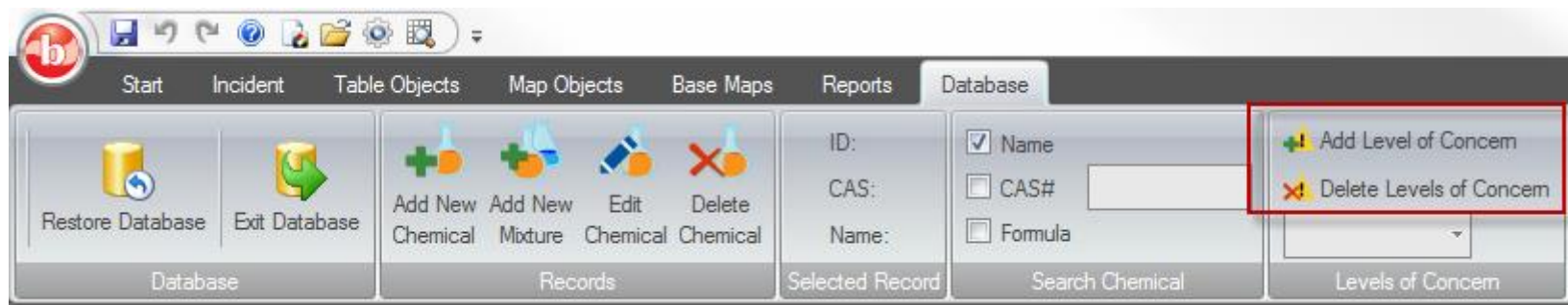
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BREEZE Incident Analyst 1.4 Release Notes

What's New in 1.4

- Improved Chemical Database to include the following updates:
 - Edit the database without having administrator privileges
 - Add Level of Concern (concentration standards) to the modeling runs



- Add mixtures with more than five chemical components

Chemical

Common Concentration Limit Vapor Pressure Pool Evaporation Flammable Dispersion Mixture

General

ID: MIX002

Name: Refinery Gas001

CAS number:

Component basis

Mass

Mole

Material Component	%
▶ Methane	80
Ethane	5
Propane	5
Butane	5
Pentane	3
Hydrogen sulfide	1
Nitric acid (100%)	1
*	

Calculate Average Properties

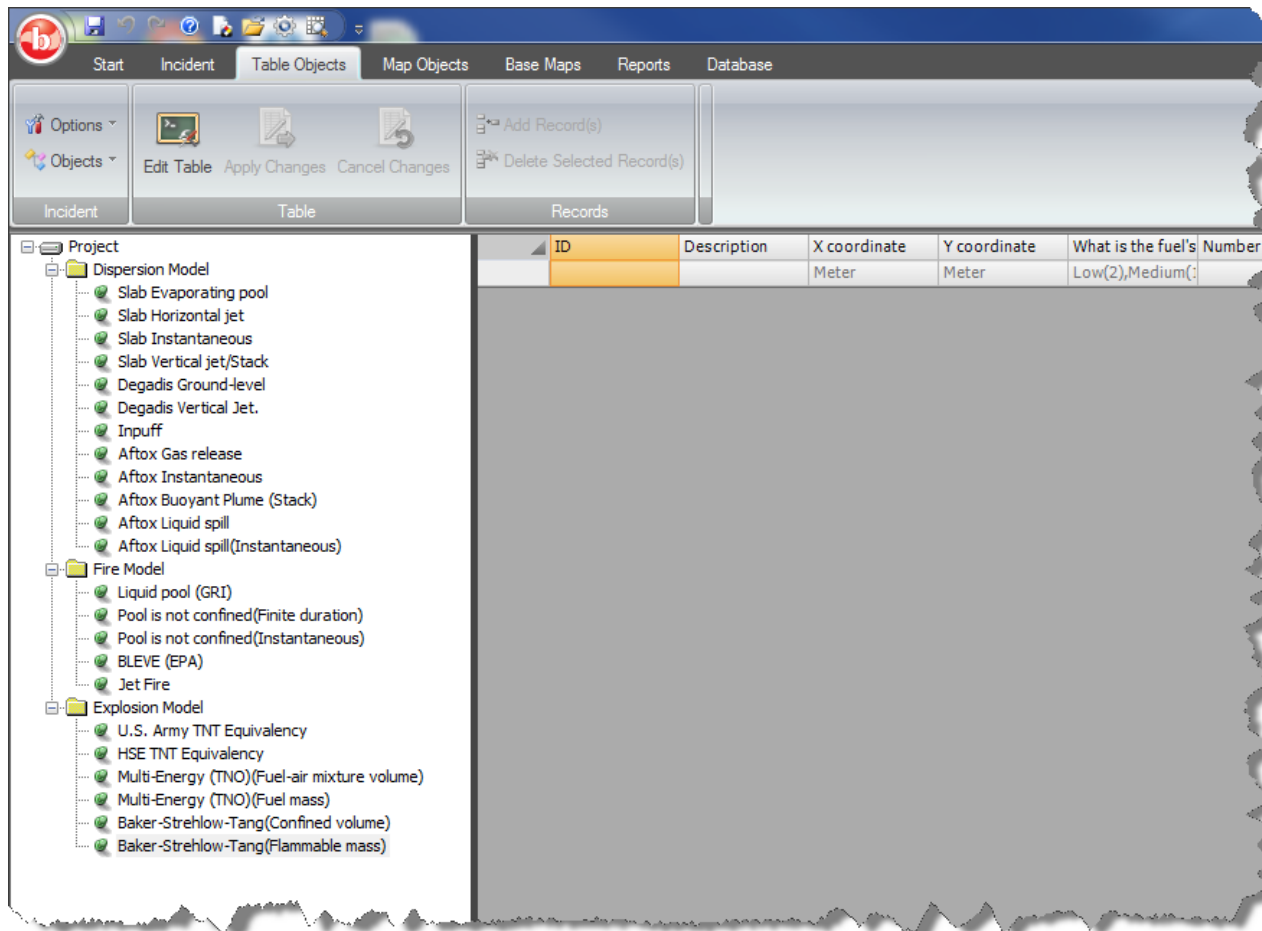
OK Cancel Help

- Edit chemicals efficiently and accurately with the improved Chemical Edit window

The screenshot shows the 'Chemical' dialog box with the 'Vapor Pressure' tab selected. The 'Default method' is set to 'Antoine Equation(AFTOX)' and the 'Fixed Value' is 0 atm. A table lists various methods and their constants.

Method	Constant A	Constant B	Constant C	Constant D	Constant E
▶ Antoine Equation(AFTOX)	6.893	1203.677	219.904	0	0
Frost-Kalkwarf Equation (AFTOX)	0	0	0	0	0
Wagner Equation (Reid Equ 1)	-698273	1.33213	-2.62863	-3.33399	0
Antoine Equation (Reid Equ 3)	0	0	0	0	0
Modified Riedel Equation (Perry's ...)	0	0	0	0	0
*					

- Implemented numerous bug fixes to the source term calculations and models in Incident Analyst to ensure a smooth modeling experience
- Added a new Table Objects Tab to speed up scenario setup and editing of sources



- Updated ComponentOne to the latest version to improve stability and pave the way for additional improvements in the future
- Optimized the naming conventions for Chemical IDs manually added by users
- Added several warning messages, including a warning message:
 - Before automatically changing Surface Roughness when an AFTOX buoyant stack source is added
 - To remind users of the constants used in Antoine Equation (AFTOX) and in Antoine Equation (Reid Equation 3) are corresponding to different pressure and temperature unit
 - If there are decimal points in the humidity value

Bug Fixes

- Fixed an issue with the shortcut that opens example projects
- Fixed a bug that caused the Help menu to be inaccessible through an existing project
- Fixed an issue with the calculation of liquid heat capacity for mixtures
- Fixed an issue with the density of liquid stored at ambient temperature
- Fixed an issue with the vapor pressure for noncryogenic liquid pool
- Removed duplicate warning messages for missing chemical property parameters
- Fixed a bug that displayed the previous summary file when there were no results for the second model run
- Resolved an issue that caused the pressure display in the summary file to be set as 1 atm for an unconfined pool fire
- Fixed an issue that caused the spill date to not update after users change the Date and Time of the modeling scenario
- Fixed an issue with the Save Changes command that prevented saving changes to the Chemical Database

- Fixed a bug that caused issues when adding more than one new chemical in the Chemical Database
- Fixed a bug that would cause the user's Chemical Database to sometimes be removed when the software is uninstalled
- Fixed a bug that would prevent updating chemical names when users edit the Chemical Database
- Updated the liquid density in pool evaporation in the Chemical Database to use Fixed Value if all components of the mixture have fixed values
- Fixed an issue with time step calculation in the INPUFF model that caused an incorrect modeling output for the first time step
- Fixed a bug that prevented calculations for the maximum concentration at given height and time for buoyant plume in the AFTOX model
- Fixed several bugs in the evaporating pool calculation through Source Term Wizard in the AFTOX model
- Resolved a bug that displayed the calculated chemical quantity in a pipe for an unlimited supply source in the Source Term Wizard as zero for the AFTOX model
- Fixed an issue that displayed the wrong vapor pressure when not using a fixed value and caused the calculated emission rate in the Source Term Wizard to be set as zero

- Fixed the bug that displayed the wrong Richardson number for certain pressurized pipe releases in the Source Term Wizard
- Fixed an issue that previously prevented the final time and release time from being set as the same in the DEGADIS model for transient releases
- Corrected the release temperature of transient emission in the default last two lines in the DEGADIS model input file