

SEVEX View

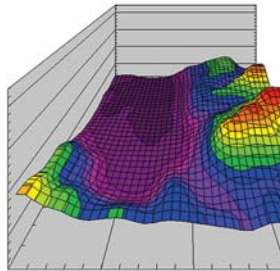
Emergency Release Model with Complex Terrain

Model Description

The source term module (SEVEX-SOURCE) includes calculation procedures for gaseous, liquid and two-phase flow rates; jet dispersion; aerosol vaporization; pool formation and evaporation, dense gas dispersion, unconfined vapor cloud explosion (UVCE) and fireball thermal radiation (BLEVE).

The meso-meteorological module is a 3-D numerical model that solves the simplified Navier-Stokes equations for wind flow in vorticity mode. Model takes into account topography and surface characteristics such as roughness length, heat, and radiation transfer between the surface and atmosphere.

The 3-D dispersion module is a Lagrangian dispersion model. It simulates passive transportation and dispersion of particles of toxics or irritants at a rate and state as defined by the source term module. The wind fields and turbulence characteristics are taken from the meso-met module.



SEVEX View is the unique, integrated approach for off-site effects analysis and effective emergency planning.

SEVEX View generates realistic hazard zones within a range of 1 to 20 km and complies with EC SEVESO Directives and CAA 112(r).

Release Types

- ▶ Instantaneous
- ▶ Catastrophic
- ▶ Continuous
- ▶ Transient

Modeled Processes

- ▶ Gaseous, liquid, two-phase flow
- ▶ Jet dispersion
- ▶ Rainout modeling
- ▶ Aerosol vaporization
- ▶ Pool formation and evaporation
- ▶ Dense gas dispersion
- ▶ 3D Lagrangian passive gas dispersion
- ▶ 2D Gaussian dispersion available
- ▶ Unconfined Vapor Cloud Explosion (UVCE)
- ▶ Thermal/Mechanical BLEVE (Boiling Liquid Expanding Vapor Explosion)



Traditional Model Results

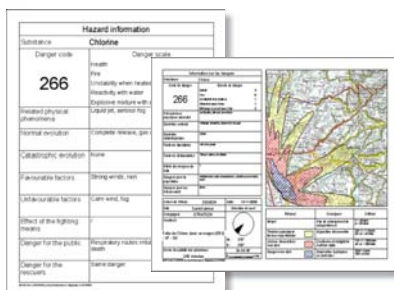


SEVEX View Model Results

Storage Conditions

- ▶ Liquid
- ▶ Cryogenic
- ▶ Compressed Gas
- ▶ Saturated Vapor
- ▶ Pressurized Liquid

Comprehensive Reports



Features

SEVEX View considers terrain effects on atmospheric flows and gas dispersion.

You can visualize the topography in context with land use and wind fields. Powerful 3D tools further improve visualization of your site.

SEVEX View produces ready-to-use maps for emergency planning teams.

The SEVEX View outputs are compiled into a database of potential accident reports showing:

- ▶ Realistic risk zone maps corresponding to defined thresholds
- ▶ Accident-specific information including substance, effects, dangers to public, and met conditions
- ▶ Instructions on behavior to adopt

In case of an emergency, the "SEVEX Atlas" provides an immediate answer or anticipated decision about the behavior to adopt and the instructions to enforce in each danger zone.

The SEVESO EXpert system, or SEVEX model, was developed by the Walloon Region of Belgium in collaboration with the Faculté Polytechnique de Mons, the Université Catholique de Louvain, the Université de Liège, and the SOLVAY s.a. Company.

Lakes Environmental Software and ATM-Pro jointly developed the Windows version of SEVEX. SEVEX View is a trademark of ATM-Pro and Lakes Environmental Software.