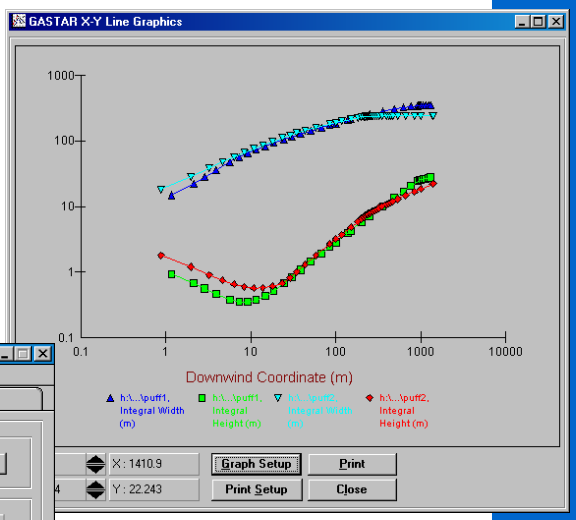
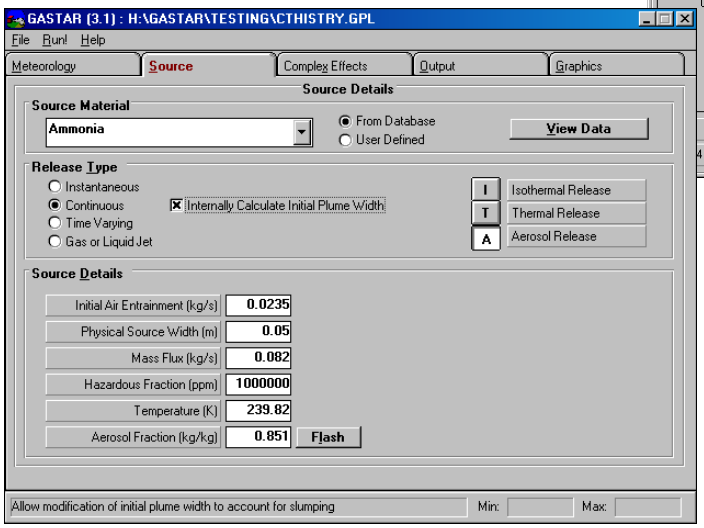
GASTAR

Dense Gas Dispersion Model

GASTAR is used for...

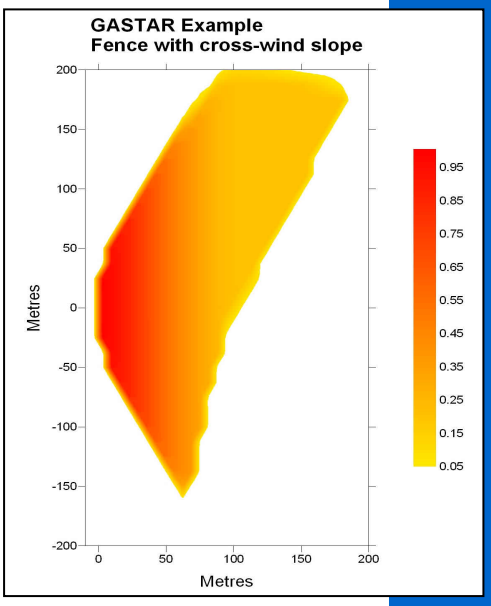
- Risk Assessment
- Land Use Planning
- Emergency Response Planning
- Management and Training





- Flexible graphics options with online Help
- Integrated X-Y graphing of all output
- Predefined material properties
- Concentration output suitable for gridding

The contour example below has used Surfer ™



GASTAR...

- Models cloud evolution from dense gas to passive
- Models puffs, plumes and transient releases
- Includes a two-phase jet source model
- Includes a pool uptake model
- Accounts for complex effects, for example, slopes and obstacles
- Is a Windows application that runs rapidly

CERC

Environmental Software

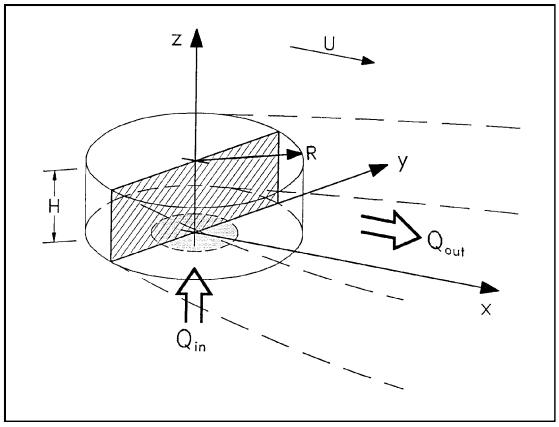
Technical Specification

Meteorology

- Use of Monin Obukhov length or Pasquill Gifford stability categories.
- Other standard meteorological parameters used to characterise the atmospheric conditions.

Source

- Select the released material from the database, or add your own.
- Choose from a selection of release types: puff, plume, transient, jet.
- Model Aerosol (flashing), Thermal or Isothermal releases.
- Optional calculation of effective plume width at the source.
- Inbuilt calculation of cloud evolution over an evaporating pool.
- Jet releases may be specified for any direction and height.
- Interfaces with CERC's comprehensive pool spill model LSMS.



Uptake of material and cloud development over a liquid pool

System Requirements

- PC running Windows XP or Windows Vista

Output

- Comprehensive output includes: concentration, dose, toxic load, cloud dimensions, temperature, position and concentration-time histories at any point.
- Output for GASTAR may be presented graphically with its integrated free floating graphics screen. A tabulated record of user input and all model output is also available.
- Concentration output on a regular x-y grid at user defined heights

Complex Effects

- Add rectangular and/or circular buildings.
- Include 2-dimensional (porous) fences.
- Model topography using simple slopes with piecewise constant properties (inclination, roughness length, wind speed).
- All buildings, fences and slopes may be orientated in any direction relative to the wind.

Validation and Verification

- Comparisons with standard field and laboratory data sets.
- Out performed other dispersion models in an independent study (available in published literature).

Model Development

- Developed by CERC, with sponsorship from the UK Health & Safety Executive, Gaz de France and the Gas Research Laboratory (USA).

Prices
For an up-to-date price list, please visit the CERC website http://www.cerc.co.uk/environmental-software/prices.php

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