CHARM® SOFTWARE AGENDA

Day 1 – CHARM Model Theory and Overview

- General overview of the CHARM model and its capabilities
- Flat terrain modeling
- Complex terrain modeling
- Modes of operation
  - Planning
  - Emergency response
- General design
- Source terms
  - Multi-phase releases
  - Chemical, air, and water interactions
  - Time varying releases
- Release types
  - Liquid/vapor from containment
  - Evaporating pools
  - Stack
  - User defined
- BLEVE's, Fires, and Explosions
- Model input
  - Release description
  - Meteorological options
  - Computational grid
  - Chemistry
- Model output
  - Source term
  - Plan view
  - Vertical X-section
  - Historical data output
  - Viewing model results in three dimensions
- Advection and dispersion
  - Puff model advantages / disadvantages
  - Denser than air releases
- Hands on exercises

Day 2 – The Graphical User Interface

- Chemical data (accessing / modifying the database)
- Working with base maps
- Modifying input data
- Introduction to WebCHARM
- Advanced processes in the complex terrain model
  - The grid model
  - Multiple sources / species
  - Liquid flow over terrain
  - Particles
  - Air chemistry
  - Interior and exterior building effects
- Hands on exercise

Day 3 – Complex Terrain Version

- Modifying computational grids
  - Working with elevation and land use data
  - Working with buildings
  - Subgrids
- Understanding and defining particle size distributions
- Chemical reactions in CHARM
  - Reaction sets
  - General reaction
  - Surface reaction