Human Health and Ecological Risk Assessment Training

December 2-4, 2024

Agenda

Day One - Morning
Introduction to Risk Assessment
Physics of Air Dispersion   - Turbulence   - Meteorology   - Receptors   - Topography   - Plume Risk   - Building Downwash   - Deposition   - Particle Phases
Hands-on Meteorological Data Processing
Refined Model Introduction. Overview and Data Input for AERMOD and BPIP models
Coordinate Systems and Maps
Hands-on BPIP and AERMOD
Terrain Processing
Day One – Afternoon
Hands-on AERMAP
Analyzing Results
Understanding PUFF and Plume Models
Atmospheric Physics – Planetary Boundy Layer Theory and Turbulence
Special Topics   - Coastal and Valley Issues   - Flares   - Odor   - Roads   Storage Tanks
Air Dispersion Modeling Challenges
Day 2 – Morning
Day 1 Review
Detailed Case Studies
Multi-Chemical Runs
Wet and Dry Deposition
Factors Unique to Risk Modeling

Day 2 – Afternoon

Human Health Risk Assessment
Exposure Scenarios
Receptor Selection (Land Use)
Watersheds/Water Bodies
Site-specific Parameters
Fate, Transport, and Toxicity Parameters

Day 3 – Morning

Day 2 Review

Risk Characterization

- Cancer
- Non-Cancer (Hazard)
- Acute

Acute

Uncertainty

Risk Communication

Hands on Case Studies

Day 3 – Afternoon

Ecological Risk Assessment

Food Webs

Receptor Selection (Land Use)

Watersheds/Water Bodies

Site-specific Parameters

Fate, Transport, and Toxicity

Risk Characterization

Uncertainty

Hands on Case Studies