

Despite the fact that oil spill dispersants have been present for more than four decades, there is still considerable debate over the use of dispersants and the impacts of dispersed oil. This course will provide the participant with background information on dispersants, how they work, toxicity concerns and impacts of dispersed oil to natural resources. After completing this course, participants will possess a greater understanding of the issues currently affecting decisions on dispersant use as a response option.

Course Agenda

Day 1 (Morning)

Chemistry of dispersed oil

- What are dispersants and how do they work?
- Oil dispersion in water
- Advantages and disadvantages of using dispersants.

Application methods

- Dispersant approval process
- Dispersant planning guidelines
- Window of opportunity
- Stockpiles and supplies
- Available application methods

Day 1 (Afternoon)

Effectiveness monitoring

- What is an effective dispersant operation?
- Usefulness of real-time monitoring with trained observers
- Special Monitoring of Applied Response Technologies (or SMART)

Understanding toxicity values and how to use the data

- What is toxicity?
- Understanding terminology (chronic, acute, LC50, EC50)
- What do the numbers mean?
- Its all about exposure

Day 2 (Morning)

Review laboratory and field research and evaluate the findings

- Historical overview
- TROPICS, BIOS and Searsport studies
- Chemical Response to Oil Spills: Ecological Effects Research Forum (CROSERF) projects
- North Sea Field Trials
- Coastal Oil Spill Simulation System (COSS), now known as SERF

Communicating toxicity information

- Bioavailability of oil and dispersed oil
- Understanding the chemistry
- Toxicity thresholds
- Comparative results between species and life stages

Day 2 (Afternoon)

Dispersant use at actual spills

- Historical overview
- International trends
- *Sea Empress*
- Review of dispersant use in U.S. oil spills

Current directions in applied research

- Coastal Response Research Center for funded projects
- Cold-water toxicity testing program
- Next generation of dispersants