



*Course manual for
Hazard Ranking System*

COURSE OUTLINE

Hazard Ranking System

- I. Introduction
- II. CERCLA and HRS: Legal Background
- III. Overview of the HRS
- IV. HRS Documentation Package and Analytical Data Quality
- V. Sources and Waste Characterization
- VI. Likelihood of Release
- VII. Targets - Level of Contamination
- VIII. Groundwater Pathway
 - A. Defining and Identifying Aquifers
 - B. Groundwater Likelihood of Release and Waste Characteristics
 - C. Groundwater Targets
- IX. Surface Water Pathway
 - A. Surface Water Likelihood of Release
 - B. Drinking Water Threat
 - C. Human Food Chain Threat
 - D. Environmental Threat
 - E. Summary of Surface Water Migration Pathway
- X. Groundwater to Surface Water Component
- XI. Air Pathway
- XII. Soil Exposure Pathway

Appendix A: Radionuclides

Course Description and Objectives

Hazard Ranking System (HRS) provides a detailed review of the HRS model and how the model is applied to various site conditions. The course is intended to enable staff to prepare HRS packages for the National Priorities List (NPL) and to plan and implement preliminary assessments (PA) and site inspections (SI) to address future HRS scoring issues. By taking the course, participants will achieve the following objectives:

- **Explain the site assessment process under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the role of HRS.** The course provides an overview of key provisions of CERCLA and the general response process established under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The course discusses procedures and requirements for conducting site assessments and using the HRS to score sites for placement on the NPL.
- **Define and explain the HRS in detail.** The course explains the overall structure and elements of the HRS and how a site score is calculated. The course also provides a detailed explanation of each scoring factor (likelihood of release, waste characterization and targets) for each pathway (groundwater, surface water, soil exposure and air) evaluated by the HRS. In addition, the course addresses HRS rules for scoring sites with releases of radionuclides.
- **Illustrate a general approach to scoring sites using the HRS and preparing an HRS package.** The course provides an introduction to the process by which HRS packages are prepared, identifies the elements of a complete package and discusses accurate site scoring. The course examines documentation and analytical data quality needed to support HRS packages.
- **Identify and use guidance and software to successfully prepare an HRS package.** The course will identify regulations and guidance issued by the EPA applicable to HRS scoring packages and has participants prepare an HRS score for a fictitious site.

Target Audience and Registration Information

HRS is 4-day training course designed for personnel who are required to compile, draft and review PA, SI and HRS documentation records and packages submitted for sites proposed for the NPL. This course is open to EPA, federal, state, tribal and contractor personnel who support site investigation programs.

Visit www.trainex.org and select the CERCLA Education Center to view the current schedule of offerings and register to attend. There are no tuition costs for this training. Participants will receive reference material, including a detailed manual, to continue their education after the course ends.

Other CERCLA Education Center Courses

- **Preliminary Assessment/Site Inspection (PA/SI):** Provides an introduction to the Superfund site assessment process and describes the PA and SI phases of this process.
- **Remedial Process:** Provides a comprehensive examination of the technical and regulatory issues that must be addressed during remedial response efforts at Superfund sites. This training is designed primarily for RPMs and other environmental professionals in the Superfund program who are responsible for or need to know about remedial activities under CERCLA.
- **RPM 201:** Provides an interactive approach to prepare RPMs for the challenges they will face as they prepare for a remedial action. The course provides instruction on how to manage common issues or concepts at remedial action sites such as vapor intrusion, sediment removal, contaminated groundwater plumes and green remediation.

Online Resources

TRAINEX

The Training Exchange website

provides a wide range of training information for staff involved in hazardous waste management and remediation. The site provides up-to-date course information and training schedules for classroom and internet-based courses.

www.trainex.org



OTHER SOURCES FOR INFORMATION

HAZARDOUS WASTE CLEAN-UP INFORMATION (CLU-IN)

www.clu-in.org

NATIONAL ASSOCIATION OF REMEDIAL PROJECT MANAGERS (NARPM) ANNUAL TRAINING PROGRAM

www.epanarpm.org

TRIAD RESOURCE CENTER

www.triadcentral.org

GREEN REMEDIATION

www.clu-in.org/greenremediation

BROWNFIELDS AND LAND REVITALIZATION TECHNOLOGY SUPPORT CENTER (BTSC)

www.brownfieldstsc.org

ENVIRONMENTAL RESPONSE TRAINING PROGRAM (ERTP)

www.trainex.org and select the ERTTP

INTERSTATE TECHNOLOGY & REGULATORY COUNCIL

www.itrcweb.org

FEDERAL REMEDIATION TECHNOLOGIES ROUNDTABLE

www.frtr.gov

TECHNOLOGY INNOVATION PROGRAM HOME PAGE ON EPA'S WEBSITE

www.epa.gov/superfund/remedytech

TECHNICAL SUPPORT PROJECT

www.epa.gov/superfund/remedytech/partner.htm

ABOUT THE CERCLA EDUCATION CENTER

The CERCLA Education Center (CEC) is a unique training forum implemented by EPA's Office of Solid Waste and Emergency Response. CEC courses have been developed cooperatively by the Office of Superfund Remediation and Technology Innovation; the Office of Emergency Management; the Office of Acquisition Management; the Office of Enforcement and Compliance Assurance; and the Office of Research and Development. Site managers from EPA regions provide technical advice, comment and support. The CEC's structured curriculum, designed primarily for EPA hazardous waste site managers and responders, enables participants to attend training that is of particular interest to them and most appropriate for their projects and workloads.

UP-TO-DATE COURSE INFORMATION

For information about course schedules, visit EPA's Training Exchange at www.trainex.org.

