



Safety and Rescue Training
for high-hazard work activities

**Confined Space
Surface Mines
Excavation
Tower**

Mine Rescue > Steep Angle / Dumps

This class focuses on developing the skills and knowledge needed to respond effectively to vehicle incidents that occur on dumps. Dumps pose a variety of unique hazards. Tailings lie at the angle of repose and any movement can cause instability which endangers both the rescuers and patient. In addition, dumps can cover many acres and rescue ropes must be long enough to extend to the patient. This can result in rope stretch and friction which impact the effectiveness of the rigging.

To overcome these challenges and operate in this environment, rescuers have to adapt their rope rigging and anchoring techniques to address the unique challenges found in the steep angle environment.

The purpose of this two-day course is to provide teams with the knowledge and skills needed to safely access, package, and evacuate patients from these steep-angle, unstable surfaces.

Pre-requisites: Students attending this class must have previously completed basic rope rescue training and first aid/CPR (need not be current).

Course Objectives

At the end of this class, students should be able to:

- Identify all hazards at the rescue scene (size-up).
- Estimate the degree of slope stability.
- Manage surcharge loads at the top of the dump.
- Identify and minimize sources of vibration.
- Identify suitable anchors.
- Identify and/or deploy a suitable high point (tripod or vehicle).
- Assess vehicle stability.
- Package the patient.
- Evacuate the patient (top-down or bottom-up).
- Conduct an effective debrief and update pre-plans.

Course Outline

Introduction to Dump Rescue

- Course outline
- Course objectives
- Steep angle environment

Slope Stability

- Angle of repose
- Surcharge loads
- Vibration
- Signs of Distress

Anchors

- Required strength
- Vehicles
- Other anchors

High Points

- High point requirements
- Tripods
- Vehicles

Steep Angle Rope Systems

- Rope system requirements
- 1-rope systems
- 2-rope systems
- Rope stretch calculations
- Friction effects: static and dynamic.
- Lowering and raising systems.
- Rescuer positioning on unstable surfaces

Patient Access

- Assessing vehicle stability
- Patient assessment and vehicle extrication
- Patient packaging
- Patient evacuation (raising/lowering)

Pre-plans and Debriefs

Our programs reflect:

ANSI/ASSE Z490.1 *Criteria for Accepted Practices in Safety, Health, and Environmental Training*

