

Lesson: Blasting

Lesson Objectives:

- Identify the importance of the role of the blasting agent and comply with general blasting safety provisions on the job site.
- Implement an efficient planning strategy and an effective blasting operation.
- Minimize blasting hazards and deploy safeguards for special blasting circumstances.

Topics

- General Provisions
- Planning and Operating
- Hazards and Special Considerations

Topic: General Provisions

This topic covers the proper training and qualifications for those engaged in blasting, as well as safety practices involving the storage, handling, and transportation of explosives. Having completed this topic, you should be able to:

- List six safe blasting practices
- Identify the qualifications of Explosive Engineers
- Exercise safety precautions for working around explosives
- Apply safeguards for storing, handling, and transporting explosives
- Use the American Table of Distances for the storage of explosives

Topic summary:

Please take a moment to review these major points before you continue with the next topic.

- In order to be qualified as a blaster, an individual must be able to communicate orders, be in good physical condition, and be competent in blasting methodology.
- Explosives are extremely dangerous, and safeguard policies for work activities, security systems, and fire preparedness must be followed.
- There are specific requirements when explosives are transported by motor vehicles.
- Storage and handling mandate specific safety requirements.

Topic: Planning and Operating

When conducting blasting operations, workers must always keep safety in mind. Construction activities often take place in areas that affect other operations. Planning must occur to minimize personal and property risks. This topic introduces safety planning and operating strategies. Having completed this topic, you should be able to:

- Formulate a planning strategy for preventing accidental discharge, handling explosives, securing areas and monitoring explosive shelf lives, and placing detonators
- Implement procedures for loading explosives safely and efficiently
- Identify provisions for initiating electric and non-electric charges

Topic summary:

Please take a moment to review these key points before you continue with the next topic:

- Formulate a planning strategy for preventing accidental discharge, handling explosives, securing areas and monitoring explosive shelf lives, and placing detonators.
- Safe and efficient explosive loading procedures are mandated for holes, equipment, and areas.
- Provisions for initiating electric blasting include general, underground, and machinery.
- Selection of a non-electric initiation system includes considering the fuse, detonating cord, firing, and inspection.

Topic: Hazards and Special Considerations

This topic makes you aware of blasting hazards and focuses on two special blasting circumstances. Having completed this topic, you should be able to:

- Identify hazards related to misfires, fumes, and underground and outdoor blasting
- Identify special precautions required for underwater blasting and underground blasting

Topic summary:

Please take a moment to review these major points before you continue with the next topic.

- Misfires, fumes, and underground and outdoor blasting must be managed not to cause hazards.
- Special safety efforts are required for underwater and excavation blasting.