



Mining Product: Blast Area Security

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This 5-minute video provides information about blast area security to those working around blast sites.

The target audience includes employees, blast crew members, trainees, subcontractors, vendors, and visitors to the worksite. The downloadable documents include questions that address particular blasting safety issues for both general audiences, blast crews, and blasters to expand on the points made in the video. This video is available in four Windows Media (wmv) versions - downloadable and streaming, high and medium resolution.

Additional Materials:

- [Blast Area Security Discussion Topics](#) 
- [Blast Area Security Video Transcript](#) 

Audience: Employees, blast crew members, trainees, subcontractors, vendors, and visitors to surface mining worksites



Video - January 2007

Download ZIP file with WMV video and SRT captions (65.06 MB) 

YouTube Video (45.58 MB) 

Pittsburgh, PA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, 2007

This video can be streamed from YouTube or a ZIP file containing a WMV file and a SRT closed caption file can be downloaded for local playback when streaming is not feasible. To use the ZIP file, download it to your computer and expand the contents into a folder of your choice. The SRT caption file will provide closed captions when using a compatible media player.

Blast Area Security

“ I don’t want anyone hurt or killed as a result of what I do for a living “ - - on-camera Blasters’ comments

“ Communication is important. Everyone on-site needs to know what’s going on and when things are going to happen “

“ When it comes to clearing the blast area, you can never be too safe “

At surface mine operations and construction sites, large amounts of earth need to be moved. Sometimes explosives are used.

- - dirt being moved at surface operation

- - surface blast

- - title : “ Blast Area Security “

Even though the blasting process is conducted in a safe manner, blasting accidents still occur. Many of the surface blasting injuries and fatalities are caused by the lack of good security around the entire blast location.

- - drilling / filling holes at strip mine

Once the location has been selected for excavation, the blaster designates the blast area. All material displaced by the explosion should fall well within the designated area. Its boundaries should be large enough to accommodate the material and all access roads must be guarded during a blast to ensure safety.

Clear communication must be established between the site manager or mine foreman and the blaster. Details of the blast layout, security, and all other safety issues need to be discussed in detail. The time of detonation for the blast needs to coincide with the workers' schedules and area traffic.

- - *Blaster and Mine Foreman discussing details*

A pre-blast meeting should be held to discuss the blast plan and the duties of everyone involved. The blasting signals are discussed to ensure everyone understands exactly when the detonation will occur and when the area is clear for traffic to resume. The blaster is responsible for testing the alarms by making sure they operate properly and can be heard throughout the entire blast area.

- - *Blaster and others (outside) looking over mine site discussing blast area*

- - *Blaster tests alarm*

“ After the blast site is loaded, I clear all personnel and equipment out of the area and post guards at all access points to keep people from coming back in.”

- - on-camera comment from Blaster #1

Once the blast area is clear, the crew and blaster go to the designated safe area. The blaster checks with the guards to ensure the area is secure, and then the warning alarm is sounded. After all of the pre-blast signals have been given, and the blaster is confident the area is secure, the shot is detonated.

- - Blaster checks-in with guards on two way radio

- - Blaster looks around / detonates shot

- - shot is detonated

“ Before anyone can re-enter the work zone, I walk the shot to check for misfires or any other dangerous situations, before I blow the all-clear to let the workers know that they can come back to the work zone.”

- - on-camera comment from Blaster #2

The blaster needs to analyze the results of every blast:

- - Blaster walks through area

- Was any debris found near the border of the blast area?

— Should the blast area be enlarged?

- - *misc. shots of blast area*

— Were there any near misses? If so, what caused them and how could they have been prevented?

— Are more guards needed?

Overall, the main concern is: Could the shot have been made safer?

Good communication is needed on every job, but it is an essential tool at sites where explosives are used.

- - *misc. shots of Blaster communicating*

Everyone needs to know exactly what their role is.

- - *road guard holding stop sign*

Alarms and signals that are used need to be discussed and understood by everyone.

By following the rules and regulations, having good communication at the work site, and having a plan to ensure blast area security, a safe work environment is created for everyone.

- - *drilling / filling holes at strip mine*