



# SafetyTalk

## Aggregates: Working on stockpiles

Every year, workers are injured or killed when working on or around stockpiles of earth, clay, sand, or gravel. Often the victim is the driver of a haul truck, loader, or bulldozer, but occasionally it can be a pedestrian or the driver of a highway truck, utility truck, or scraper.

In February of 2008, a worker was breaking down frozen gravel on the surface of a stockpile with an excavator. A large amount of gravel suddenly broke free and hit the side of the excavator's boom and cab, injuring the worker's foot. The company was fined \$65,000 for failing to remove frozen material from the stockpile.

### Explain the dangers

- When material is being removed from a stockpile, the slope could collapse or large frozen chunks of material could fall off and severely injure the operators.
- When work is being done at the top of a stockpile, the equipment can weaken the crest of the pile. Drivers have died when their equipment tipped over and rolled down the slope.
- Equipment operating at the top of the stockpile could drive over the edge or through a berm.
- Pedestrians at the bottom of the slope could also be seriously injured by falling material.

The stability of the slope can quickly change with fluctuations in the weather (changes in moisture, freezing and thawing, etc.).

### Identify controls

Consider some of these simple safety tips.

#### **Before starting work**

- Use the site plan to remind yourself of the location of structures, stockpiles, and roadways.
- Never exceed the maximum height of any stockpile. Maximum height must be determined by an engineer.

#### **When loading**

- Never enter an active loading area.
- Never leave the cab of your vehicle while loading is in progress.
- For a linear stockpile, excavation must proceed along the working face. For a conical stockpile, it must proceed around the toe.
- If you are removing earth, clay, sand, or gravel with powered equipment, the working face should be sloped at the angle of repose, or the vertical height of the working face should not be more than 1.5 metres (5 feet) above the maximum reach of the equipment.
- If the stockpile is too high, some of the material should be bumped over the crest by means of a bulldozer or long-arm backhoe and buffer material. The area below should be cleared.
- Never undercut the working face or leave a hollow in it.

#### **When operating on top of a stockpile**

- Use a bulldozer or loader, together with buffer material, to push the material over the crest of the pile.
- Always keep an eye out for cracks, slumping on the slope, or bulging at the toe. These are signs that the slope may be unstable. If you see any of them, warn other workers immediately.
- Barriers and berms must never be moved or altered.
- When using a loader or bulldozer, always approach the crest at a right angle (90 degrees) to the edge to keep the weight of the equipment away from the edge.

#### **Demonstrate**

- Review the site plan.
- Point out any stockpiles.
- Ask what the maximum height is for each stockpile.
- Ask loader operators to explain how they will excavate material from each stockpile.