CRUSHED STONE FATALITY

FALL OF PERSON

• A 46 year old contractor welder with 4 years of steel erection, plant maintenance, and welding was fatally injured.
• The victim was preparing to weld on an overhead ventilation duct.
• The victim was using a ladder to access the duct when he fell over a handrail approximately 45 feet to the ground.
CRUSHED STONE FATALITY
FALL OF PERSON

WHAT HAZARDS WERE PRESENT?
PPE WORN

• AT THE TIME OF THE ACCIDENT THE VICTIM WAS WEARING:
  o A standard fiberglass hardhat
  o An automatic darkening welder face shield
  o Leather welding gloves
  o Electric hazard protection safety boots

WHAT ADDITIONAL PPE SHOULD HAVE BEEN USED?
PPE WORN

COULD THE PPE HAVE CONTRIBUTED TO THE ACCIDENT?

IF YES, WHAT COULD HAVE CONTRIBUTED?

POOR VISIBILITY FROM WELDING HELMET?
The victim and his coworker were assigned to weld ventilation ductwork on the third level of the load out building permanently in place.

The coworker positioned a stepladder on the stairway, tied off the fall protection he was wearing, and climbed up onto the ventilation ductwork to begin welding one of the ductwork joints.

The victim positioned the welding leads he was going to use and then repositioned the same ladder used by the coworker.

The duct being installed was located slightly higher and about 24” from the existing duct.
FINDINGS

• Handrails were in place on the landing.
• The ladder was an 8 foot fiberglass stepladder rated at 250 lbs. load capacity.
• The left rear rail of the ladder was cracked, but contained a brace between the rail and the bottom horizontal strut that reinforced the rail at the crack.
• The coworker saw the victim place his foot on the bottom step of the ladder, then turned and began welding.
• The coworker heard a noise and saw the victim falling over the handrail of the stairway landing.
SAFE WORK PRACTICES

WHAT SAFE WORK PRACTICES WOULD HAVE PREVENTED THIS FATALITY?
MSHA BEST PRACTICE

• Always use fall protection when working where a fall hazard exists.
• Position ladders to ensure their stability and to eliminate trip hazards.
• Always face the ladder when climbing or working from a ladder.
• Do not lean to reach items while standing on a ladder.
• Always maintain three points of contact with the ladder when climbing or working from a ladder.
WHAT WAS THE ROOT CAUSE OF THIS FATALITY?
MSHA ROOT CAUSE

• MANAGEMENT FAILURES
  o Contractor management policies and procedures were inadequate and failed to ensure that persons could safely perform work while standing on a ladder where there was a danger of falling.
Portable Ladders
Be Aware

• Always maintain three points of contact (two hands and one foot, or two feet and one hand).
• Keep your body near the centerline of the ladder.
• Do not move or shift a ladder while someone is on it.
OTHER FALL OF PERSON FATALITIES

- **January, 2008 – ORO Grande Cement Quarry**
  - Truck Driver with 3 ½ years experience fatally injured.
  - The driver fell from the top of a bulk cement trailer to the ground below.
  - The driver was on top of the trailer closing and securing the hatches after the trailer was loaded with cement.
ACCIDENT SCENE

Victim Fell from this area.
BEST PRACTICES

• Identify all potential hazards
• Train miners to recognize hazards from falling
• Ensure that persons wear fall protection where there is a danger of falling
• Establish safe access to work areas
OTHER FALL OF PERSON FATALITIES

• A customer truck driver was injured at a surface limestone operation when he fell down the steps leading to a scale house ticket window.

• Death was due to complications of injuries received when he fell at work.
ACCIDENT SCENE

VICTIM FELL DESCENDING STAIRS
• The death certificate indicated the victim died of ischemic heart disease.
OTHER FALL OF PERSON
FATALITIES

• A contractor with no mining experience was fatally injured when he fell from a step ladder.
• The victim was standing on one of the steps of the 10 foot ladder assisting with the installation of a steel rolling overhead door.
• The door began to toll from the fully opened position and struck the ladder.
• The victim fell, struck his head on the concrete pad.
• The victim was wearing a harness but the lanyard was not anchored.
APPROXIMATE POST ACCIDENT LOCATIONS

Manlift platform used during door installation

Position of ladder
Post accident

Location of Victim
PREVENTION

COULD THIS ACCIDENT HAVE BEEN PREVENTED?

WHAT COULD HAVE PREVENTED IT?
BEST PRACTICES

• Identify hazards prior to starting work.
• Position ladders for protection from moving objects or from being bumped or knocked over.
• Securely block equipment from motion when working around it.
• Use fall protection and tie off where there is a danger of falling.