



## MSHA's Accident Prevention Program Safety Idea

Safety and  
Health are  
Values!

### Overhead Powerline Hazards

**Problem:** Overhead high-voltage conductors or "lines" are usually bare wires supported by poles or structures, traversing across mine property. A risk of danger exists for personnel when mobile equipment, such as trucks, drill rigs, cranes, etc. contact these lines. Based on accident data recorded by MSHA from 1980 to 1997, there have been 106 accidents involving overhead lines. Of these 106 accidents 32 resulted in fatalities.

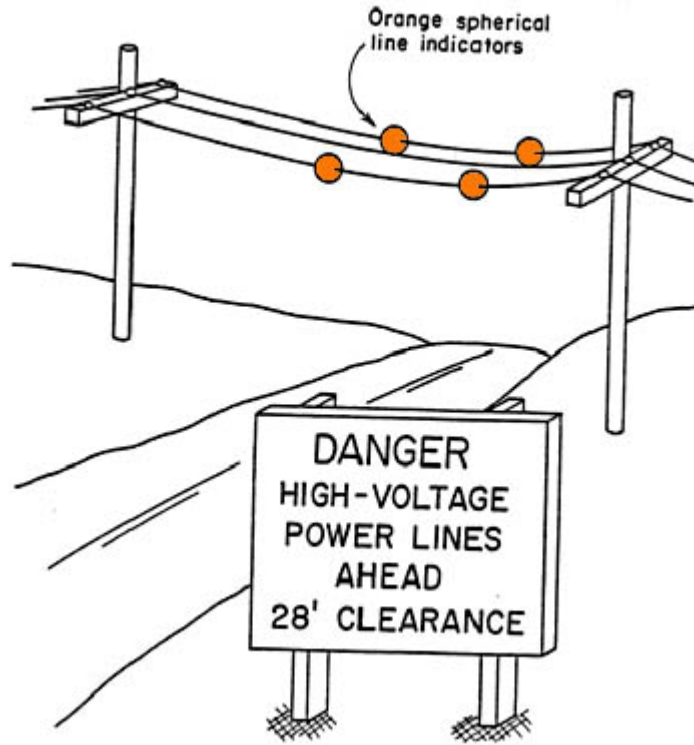
Overhead lines near the following sites and activities can present a serious hazard:

- Storage yards and delivery areas (where cranes may operate).
- Mobile equipment maintenance, parking, and fueling areas.
- Haulage and access roads, particularly those near dump/load points, and pull-off areas on these roads (dump-bed trucks running with beds up, cleaning beds, and raising tarps).
- Stockpiles, dumping points, loading areas, and truck scales (raising truck beds).
- Mining benches and active pit areas in general, particularly near blast hole drilling operations.
- Adjacent to mine plant structures, such as processing plants, slopes/hoists, belt lines, transfer points, settling ponds, and waste dumps (cranes and dump-bed trucks used in routine maintenance).
- Exploration/test drilling sites.
- Construction sites, particularly if cranes or scaffolds are in use.
- Unintentional buildup of roadways under overhead lines.

**Solution:** There are several ways to avoid accidental overhead electric power line contacts and resulting injuries:

- Position miners as "spotters" to alert equipment operators of the proximity of their equipment to energized powerlines
- Install and maintain commercially available non-contact powerline proximity devices. These devices can:
  - provide audible and visual alarms,
  - shut down an entire machine or desired functions of a machine,
  - be designed to detect powerlines from far distances, and
  - provide protection for the entire length of a boom or truck bed.
- Recognize potential hazards. Train workers to "Look up" prior to starting work.
- Install physical barriers under overhead lines.
- Erect signs to identify a danger zone
- Raise problem sections of overhead line to at least 40 ft. above ground.
- Have the electric power utility company install insulating barriers or sleeve conductors where equipment must operate.
- Have high visibility spheres installed on energized lines to help make the line location obvious to all workers.
- Have the electric power utility company temporarily de-energize the power lines.

### Spherical Line Indicators at Potential Contact Points



### Power Line Insulating Guards



**"Mark the Line"**