

## Underground Welding, Cutting and Other Hot Work Checklist

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Underground Construction including tunnels, shafts, chambers, passageways, etc...

### **Air and Barriers:**

- No more than a 24-hour supply of fuel and oxygen allowed underground
- Non-combustible barrier installed below if working in or over a shaft

### **Ground Support:**

- Portal areas guarded by shoring, fencing, head walls, or shortcreting
- Non-combustible barrier installed below if working in or over a shaft
- In hazardous subsidence areas, create stability by shoring, filling in, or erecting barricades
- Underground areas
  - Inspect roof, face, and walls for ground stability
  - Loose ground must be scaled, taken down, or supported shafts
- If worker will enter shaft deeper than 5 feet, then support shaft with steel casing or other material

### **Blasting:**

- Wires kept clear of conductive material

### **Drilling**

- Receptacles or racks provided for storing drill steel located on the jumbos
- Drills on columns anchored, retighten as necessary
- Stairs for jumbo decks higher than 10 feet high
- No blasting holes drilled through muck or water
- Caution sign posted where air lines are buried or hidden

### **Haulage:**

- Audible warning device and warning lights
- No endless belt-type manlifts
- Precautions to prevent rolling of unattended equipment
- Safety chains in addition to couplers when grade exceeds one percent
- Parked rail equipment choked, blocked, or braked
- Berms, bumper blocks, safety hooks to prevent over-travel and overturning at dumping locations
- Only small handtools or lunchpails transported with employees in mancars



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### **Electrical Safety:**

- Power lines insulated or away from water lines or other conductive materials

### **Underground Hoisting:**

- Warning light at bottom and at subsurface shaft entrances below load
- Spin-type connections kept clean
- Cage, skip, and load connections to the hoist rope made so that connection will not be undone—moused or latched open throat hooks do not meet this requirement
- For wire rope wedge sockets, wedge escapement prevented
- Cranes equipped with limit switch to prevent overtravel at the boom tip
- Enclosed metal cages used to raise and lower persons in shaft

### **Hoists:**

- brakes automatically applied on power release or failure
- control levers of the “deadman” type that return to neutral position upon release
- fire extinguisher mounted at each hoist house
- landing level indicators at operator’s station (marking of hoist rope does not meet this requirement)
- hoist operators equipped with closed-circuit voice communication system to talk to landing station

### **Cofferdams:**

- Warnings posted for emergency evacuation of workers

### **Compressed Air:**

- Employer-designated representative present to ensure compliance with compressed air requirements

