Standard Issue PPE - Personal PPE Specialty PPE

Health Hazards in Construction

- Night work visibility
- Public ROW
- Impact – Crushing
- Flying objects
- Falling objects
- Hand protection
- Fall protection

PPE
The Last Line of Defence

- Chemical
  - Gases
  - Vapors
  - Fumes
  - Dusts
  - Fibers
  - Mists

- Physical
  - Temperature
  - Noise
  - Repetitive Motion & Awkward Postures
  - Ionizing & Non-Ionizing Radiation

- Biological
  - Fungi (Mold)
  - Bloodborne Pathogens
  - Bacteria
  - Poisonous Plants
  - Poisonous & Infectious Animals
Anticipation of Health Hazards

To anticipate hazards: –

- Survey job-site conditions. – (See attached JHA)
- Be aware of the actions and behaviors of workers.

Hazardous conditions that can be anticipated on construction job-sites include:

- Confined or enclosed spaces (hazardous atmospheres).
- Contaminated soil conditions (hazardous atmospheres).
- Unsanitary conditions (poor housekeeping, poorly kept toilet facilities, etc.).
- Presence of hazardous materials (dangerous coatings on structures & metal containing alloys, concrete & silica).
- The use of hazardous chemicals (gases, solvents & glues).
- The presence of residues left by degreasing agents, usually chlorinated hydrocarbons (chloroform and carbon tetrachloride).
- Older buildings and structures; unoccupied dwellings (fungi/mold, asbestos & lead).
- Extreme temperatures (hot & cold environments; working outside or in attics, boiler rooms, etc.).
- Radiological exposures (nuclear power plants, antennas, hospitals, laboratories and the sun).
- Loud noise (use of tools and equipment).
- Hot work (welding and cutting).
- The presence of plant and/or animal wildlife (poisonous venom, feces, rabies...).

Use your senses

What do you see?

- Visible material in the air –
  
  If you see visible clouds of vapor or particles, there may be a serious exposure problem. Remember, however, that most gases and vapors are invisible, and that often
the most dangerous particles are too small to see.

- **Settled dust** –
  
  If there is chemical dust on the ground or other surfaces, it probably got there by settling out of the air. If disturbed, settled dust can become airborne again.

- **Warning signs, labels & decals** –
  
  As required by Cal-OSHA GISO §5194. Hazard Communication and other applicable standards.

**Do you hear anything?**

Loud noise can severely damage your hearing!
Sources of loud noise in construction:

- Hand tools (e.g., metal hammers)
- Power tools (e.g., jackhammers, grinders, saws, powder actuated tools)
- Equipment (e.g., generators, excavators, cranes, trucks)
- Blasting

**What does it feel like?**

- Are there sharp edges or protruding objects
- Is the object very hot or cold
- Is it wet from oils, grease or chemicals
- Is it caustic or acidic

**Does it smell funny?**

- Many construction projects have nocuous gases present; ie H₂S, methane or other gases
- Mold or decomposing materials
Is it wet from oils, grease or chemicals

**What does your inner voice say?**
- Sometimes things just don’t feel right
- You don’t quite know what it is but you know you don’t want to go there

**Hierarchy of Controls**
Controlling exposures to occupational hazards is the fundamental method of protecting workers. Traditionally, a hierarchy of controls has been used as a means of determining how to implement feasible and effective controls.

Cal-OSHA requires that employers use the hierarchy of controls in order of preference for protecting the worker.

**Hierarchy of controls in order of preference:**

1. **Elimination of hazard;** Substitution with safe alternative.
2. **Engineering;** Ventilation & wet methods.
3. **Administrative;** Work practices, scheduling workers to minimize exposure, extended breaks, etc.
4. **Personal Protective Equipment (PPE);** Respiratory and hearing protection, protection of face, hand, feet, eyes & whole body.

**BCA will provide all the PPE you need…. you just need to make sure you use it.**