



Occupational Health Hazards

Occupational Health Hazards

Three classes of occupational health hazards include

1. Chemical hazards
2. Biological hazards
3. Physical hazards

Chemical Hazards

- Enter body through
 - Inhalation
 - Absorption
 - Ingestion
- Inhalation is most common route
- Many chemicals cannot be detected easily by the senses
- To prevent exposure
 - Practice proper hygiene
 - Wear PPE

Chemical Hazards

Chemical hazards include

- Sandblasting
- Painting
- Lead exposure
- Compressed air
- Benzene
- Organic solvents
- Carbon dioxide and nitrogen
- Asbestos, fiberglass and manmade mineral fibers
- Mercury
- Methanol

Biological Hazards

- Naturally occurring substances
- Sources
 - Bacteria
 - Viruses
 - Fungi
 - Insects
 - Plants
 - Birds
 - Animals
 - Humans

Biological Hazards

- Exposure through
 - Inhalation of dust or dander
 - Ingestion of contaminated food
 - Injected through animal bites or needle sticks
- Once inside the body they can cause
 - Infections
 - Allergies
 - Poisoning

Biological Hazards

- Be aware of site specific wildlife
 - Poisonous plants
 - Venomous snakes
- Do not approach an animal
- Be aware of insects that may cause anaphylactic shock
 - Mosquitos
 - Ticks
 - Bees

Biological Hazards

Preventative measures

- Properly storing food
- Avoiding potentially contaminated animals
- Washing hands and face
- Reducing dust and aerosol levels
- Proper PPE
- Care when performing first aid
- Avoiding contaminated items

Physical Hazards

Naturally occurring radioactive material (NORM)

- Found in formation material brought to surface by production of oil and gas
- Levels can be dangerously high and may cause cancer
- Primarily inhalation or ingestion hazard
- Protection includes
 - Respirators and protective clothing
 - Site specific NORM training

Adverse Weather Conditions



Lightning

- Electrical discharge caused by imbalance between positive and negative charges
- Can cause death
- Follow company policies or local response procedures
- Shelter indoors or inside a vehicle

Adverse Weather Conditions

Lightning

- Avoid areas that contain
 - Water
 - High elevations
 - Metal objects
 - Open spaces
- Do not
 - Retreat under trees
 - Stand next to vehicles

Adverse Weather Conditions



Tornadoes

- Powerful events that can develop quickly with little or no warning
- Tornado watch
 - Conditions are favorable
- Tornado warning
 - Tornado has been seen or has formed

Adverse Weather Conditions

If there is an interior bathroom in the home, it is a good idea to hide inside a bathtub.

Indoors during tornado

- Go to lowest floor
- Use the stairs
- Stay in the center room away from windows
- Go to a room with plenty of supports
- Crouch down
- Cover head with hands

Adverse Weather Conditions

Outdoors during tornado

- Find a sturdy building
- Stay away from trees and vehicles
- Lie flat and face down
- Crouch down and cover head with arms

Adverse Weather Conditions

In a vehicle during tornado

- If the tornado is far away
 - Drive at right angles away from tornado
- If the tornado is close
 - Follow outdoor procedures
 - Do not remain in vehicle

Adverse Weather Conditions



Hurricanes

- Produce strong winds and heavy rain
- Hurricane season is between June 1st – November 30th
- Companies have hurricane contingency plans

Adverse Weather Conditions

Hurricanes

- When a hurricane watch is issued
 - Begin preparations immediately
- When a hurricane warning is issued
 - Follow the hurricane contingency plan for the facility
 - Follow any recommendations made by authorities
 - Heed all evacuation orders

Adverse Weather Conditions

A tsunami is a series of waves. Do not return to an affected coastal area until it is safe.

Tsunamis

- Wreak havoc on coastal populations and landscapes
- Plan an evacuation route
- Know warning signs
 - Rapid rising or falling coastal waters
 - Rumbblings of earthquake
- Never stay near shore

Adverse Weather Conditions



Flooding

- Make sure that you have a plan
- Be aware of watches and warnings
- Precautions include
 - Preparing
 - Moving to higher ground
 - Evacuating if advised

Adverse Weather Conditions



Earthquake preparation

- Earthquake readiness plan
- Locate a safe place in each room
- Keep supplies

Adverse Weather Conditions

If an earthquake occurs

- Take cover under desk or table
- Stay indoors until tremors stop
- Stay away from furniture that can fall
- Stay away from windows
- Turn off your gas and water mains
- If outdoors, find clear spot and drop to the ground
- If in a car, stay in the car until shaking stops

APEC