

By: Abby Langdon
Occupational Hygiene Officer
ACME Chemical Company

INCREASING AWARENESS OF CHEMICAL POISONING

WHAT ARE WE EXPOSED TO AT ACME?

- ✘ There are several chemicals that we are exposed to regularly
- ✘ Some more toxic than others
 - + Hydrogen Sulfide is one of the most toxic!

HYDROGEN SULFIDE

- ✘ Extremely toxic and irritating gas
- ✘ Can cause instant death
- ✘ Blocks the oxidative process of tissue cells
- ✘ Reduces the oxygen carrying capacity of the blood
- ✘ Depresses the nervous system
- ✘ Causes respiratory failure and asphyxiation

WHEN AND WHERE ARE WE EXPOSED?

- ✘ Naturally in crude production, natural gas, volcanic gases, hot springs.
- ✘ Industrial sources include: refineries, natural gas plants, petrochemical plants, coke oven plants, paper mills, food processing plants, tanneries.

SIGNS, SYMPTOMS AND EFFECTS:

- ✘ Irritated eyes and respiratory tract
- ✘ Conjunctivitis, pain, lacrimation and photophobia that may persist for several days
- ✘ Coughing, pain in breathing, pain in nose and throat
- ✘ Repeated exposure : headache, dizziness and digestive disturbances
- ✘ Collapse and death
- ✘ 10 ppm: eye irritation
- ✘ 50-100 ppm: conjunctivitis respiratory irritation
- ✘ 100 ppm :coughing, eye irritation -loss of sense of smell 2-15 minutes
- ✘ 500-700 ppm: loss of consciousness and death in 30 -60 minutes
- ✘ 700-1000 ppm: Rapid unconsciousness and cessation of respiration and death

LONG TERM EFFECTS

- ✘ Repeated exposure to low concentrations causes conjunctivitis, photophobia, corneal bullae, tearing, pain and blurred vision.
- ✘ Exposure to high concentrations causes rhinitis, bronchitis, and pulmonary edema.
- ✘ Chronic poisoning results in headache, inflammation of the conjunctivae and eyelids, digestive disturbances, weight loss and debility.
- ✘ Very High concentrations cause death.

EXPOSURE LEVELS

- ✘ Time Weighted Average (TWA) – 8 hours per day 40 hours per week
- ✘ TWA which should not be exceeded more than 4 times per day with 60 minutes between exposures
- ✘ Short Term Exposure Limit (STEL) – 15 min

PREVENTION

- ✘ Primary Prevention-
 - + Air Monitoring
 - ✘ Alarms, Detectors
 - ✘ Follow safety regulations strictly
- ✘ Secondary Prevention(Screenings)-
 - ✘ **Regular check ups to look for:**
 - ✘ Respiratory irregularities
 - * Painful breathing, mucus build up.
 - ✘ Nervous system delays
 - ✘ Olfactory exams
 - ✘ Eye/sight tests
 - * Conjunctivitis, cataracts.
 - ✘ Nose and throat irritation
 - * Pain, swelling.
- ✘ Tertiary Prevention-
 - + Treat possible illnesses
 - ✘ Antibiotics, corticoid steroids, prescriptions

COSTS:

- ✘ Regular hydrogen sulfide screenings will be covered by company insurance.
 - + I.E- Physician visits, specialists, etc.
- ✘ GasBadge Plus H₂S Hydrogen Sulfide Detector
 - + ~\$125
 - + These are personal monitors so employees who are at risk for exposure will have one provided.

WHY SHOULD WE SCREEN FOR ILLNESS AND PREVENT EXPOSURE?

- ✘ Hydrogen sulfide is deadly.
- ✘ If there is hydrogen sulfide in the air employees are not in a safe work environment.
- ✘ Exposure can lead to fatigue, and unconsciousness which can lead to more accidents and thus putting employees in an unhealthy work environment.
- ✘ Healthy work environments also lead to more efficient tasks and proper routines for jobs.
- ✘ Having more efficiency and proper guidelines being met makes ACME a more efficient and environmental friendly company.

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