Unit 4

WORKPLACE HEALTH AND SAFETY

Chapter 4.2

Unsafe act & Unsafe Condition- Electrical Hazards- Crane Safety-Toxic gas Release

Unsafe Act & Unsafe Condition:

1. **Unsafe Act:**
   - Define an unsafe act as any behavior or action that deviates from established safety procedures and poses a risk to the individual or others.
2. **Examples of Unsafe Acts:**
   - Not wearing appropriate personal protective equipment (PPE).
   - Running in work areas.
   - Failure to follow lockout/tagout procedures.
   - Improper use of tools or equipment.
3. **Reporting and Corrective Action:**
   - Encourage a culture of reporting unsafe acts without fear of reprisal.
   - Implement a system for reporting and addressing unsafe acts promptly.
   - Emphasize the importance of coaching and retraining to correct unsafe behaviors.
4. **Unsafe Condition:**
   - Define an unsafe condition as a physical situation or state that increases the risk of accidents, injuries, or damage.
5. **Examples of Unsafe Conditions:**
   - Slippery floors.
   - Poorly maintained equipment.
   - Overcrowded or cluttered work areas.
   - Inadequate lighting.
6. **Hazard Identification:**
   - Promote regular hazard identification assessments to identify and address unsafe conditions.
   - Establish a reporting mechanism for employees to report unsafe conditions.

7. **Preventive Maintenance:**
    - Stress the importance of regular maintenance to address and correct potential unsafe conditions.
    - Implement preventive maintenance programs for equipment and facilities.
8. **Employee Involvement:**
    - Encourage employees to actively participate in identifying and reporting both unsafe acts and conditions.
    - Recognize and reward employees for contributing to a safer work environment.

Electrical Hazards:

1. **Risk Assessment:**
    - Conduct a thorough risk assessment to identify electrical hazards in the workplace.
2. **Lockout/Tagout Procedures:**
    - Emphasize the importance of lockout/tagout procedures before performing any electrical work.
    - Provide training on proper lockout/tagout practices.
3. **Personal Protective Equipment (PPE):**
    - Mandate the use of appropriate PPE, including insulated gloves and safety goggles.
    - Train employees on the correct use and maintenance of electrical PPE.
4. **Qualified Personnel:**
    - Ensure that only qualified personnel are authorized to work on electrical systems.
    - Define the qualifications and training requirements for electrical work.
5. **Electrical Safety Training:**
    - Conduct regular electrical safety training for all employees, not just those directly working with electricity.
    - Include information on identifying electrical hazards and emergency response procedures.
6. **Equipment Maintenance:**
    - Implement a regular maintenance schedule for electrical equipment.
    - Promptly repair or replace damaged electrical cords, outlets, or equipment.

Crane Safety:

1. **Operator Training:**
   - Require crane operators to undergo comprehensive training and certification.
   - Regularly assess and update their skills through refresher courses.
2. **Pre-Operation Inspection:**
   - Implement a pre-operation inspection checklist for cranes.
   - Ensure that operators conduct a thorough inspection before using the crane.
3. **Load Capacity:**
   - Clearly communicate load capacity limits for each crane.
   - Emphasize the importance of not exceeding these limits.
4. **Communication Protocols:**
   - Establish clear communication protocols between crane operators and ground personnel.
   - Use standardized hand signals or radios to communicate effectively.
5. **Restricted Areas:**
   - Define and mark restricted areas where cranes are operating.
   - Prohibit unauthorized personnel from entering these areas during crane operations.
6. **Emergency Procedures:**
   - Develop and communicate emergency procedures for crane-related incidents.
   - Ensure all personnel are aware of evacuation routes and assembly points.

Toxic Gas Release:

1. **Risk Assessment:**
   - Conduct a thorough risk assessment to identify areas with the potential for toxic gas release.
2. **Gas Detection Systems:**
   - Install and maintain gas detection systems to monitor the presence of toxic gases.
   - Implement alarms and automatic shutdown systems in case of gas detection.
3. **Personal Monitoring:**

- Provide personal gas monitoring devices for workers entering areas where toxic gases may be present.
- Train personnel on the use and interpretation of monitoring devices.

4. **Emergency Response Plan:**
   - Develop a comprehensive emergency response plan for toxic gas releases.
   - Include procedures for evacuation, first aid, and communication during an emergency.
5. **Evacuation Drills:**
   - Conduct regular evacuation drills to ensure that employees are familiar with emergency procedures.
   - Include scenarios involving toxic gas releases.
6. **Respiratory Protection:**
   - Provide appropriate respiratory protection equipment for workers who may need to enter areas with toxic gases.
   - Ensure that employees are trained on the proper use, fitting, and maintenance of respiratory protection.
7. **Chemical Storage and Handling:**
   - Implement proper storage and handling procedures for chemicals to prevent accidental releases.
   - Clearly label chemical containers and provide Material Safety Data Sheets (MSDS) for reference.
8. **Employee Training:**
   - Conduct regular training sessions on the hazards of toxic gases and the importance of adhering to safety procedures.
   - Reinforce the significance of immediate reporting in the event of a gas release.