Chemical Hazard Mapping Exercise for Chemical Safety Training

Walk Through/Inspection Activity for Hazard Identification
This will be a hands-on activity, done in pairs, that will both inform everyone of facility hazards related to chemicals and also be a model for how to involve staff in active involvement in safe operations.

Introduction (10 min)
- Explain that a job hazard is anything that can cause illness or injury to an employee in the workplace.
  - Discuss acute (short term) versus chronic (long term) effects
  - Discuss variability among hazards with respect to time between exposure and symptom (latency period)
- Ask the group to name a few potential hazards from their own workplace. Write down the responses.
  - If group members begin listing injuries, ask them about the hazards that can cause those injuries

Activity (15 min)
- Ask the group to divide into pairs. Distribute the Chemical Hazards Checklist, pens/pencils, and a red marker to each pair.
- Ask each pair to read through the Checklist, and use it to think about the potential hazards in their workplace
- After they’ve brainstormed potential hazards, ask which hazards they are most concerned with.
- On a large piece of paper, draw a simple floor plan of the workplace in black marker (or ask a volunteer to draw it).
  - Ask the group for input to make sure all the major equipment and key areas are included.
- Ask each pair to mark the locations of their three hazards of concern on the map using the red markers.
  - Explain that they can have more than one hazard in the same location.
- For hazards that cannot be easily tied to a location (such as stress or lifting), group members can write it on the side of the map.
- For airborne hazards, the post-it should be placed near the source of the dust, smoke, or fume.

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Susan Harwood Training Grant Program
NYCOSH Training

Topic of Training: Chemical Safety Training Date: ________________
Location: __________________________ Time (from – to): ________________
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- Ask the group to notice where the most number of hazards have been drawn

Wrap Up (10 min)
- On a large piece of paper/board, write a list of the main hazards identified by the group, beginning with the areas that have the most post-its.
  o Next to each hazard, mark the number of post-its each hazard received
- Ask group members to explain why they have marked those areas, and why they are a concern.

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Chemical Hazards Checklist

☐ Are chemical containers (including cleaning products) properly labeled and stored?
☐ Are flammable liquids stored in metal cabinets?
☐ Are any hazardous chemical containers leaking or visibly damaged?
☐ Is there visible exposure: visible dusts, mists, smoke or fumes; worker’s clothing getting wet from chemical materials; smell of chemicals?
☐ Is Personal Protective Equipment (PPE) available and provided, as needed (coveralls, gloves, eye protection, respirators) to protect against hazardous chemicals?
☐ Is there an inventory of hazardous chemicals in the company Hazard Communications written program?
☐ Is the product identifier on the inventory the same as that listed on the product label and its SDS?
☐ Are current Safety Data Sheets (SDS) for chemicals maintained and their location known to workers?
☐ Are the written program, hazardous chemical inventory and storage locations know to workers?
☐ Is there adequate ventilation to meet OSHA air quality standards for hazardous chemicals?
☐ Is air monitoring required to meet any OSHA Permissible Exposure Limits or ACGIH Threshold Limit Values?

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