

Contact Safety

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Mine Safety & Training Section

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**GOOD
HOUSEKEEPING
IS THE FIRST
PRINCIPLE
OF SAFETY**

Effective housekeeping can eliminate most workplace hazards and help get the job done safely.

Poor housekeeping frequently contributes to accidents by hiding hazards. If debris, clutter and spills are accepted as normal, then other more serious health and safety hazards may be taken for granted. According to the National Safety Council, "workplace safety programs should incorporate housekeeping, and every employee should play a part." In addition, management should show a commitment so that employees understand its importance.

Housekeeping extends beyond traditional offices and includes industrial workplaces (mining operations), warehouses, and manufacturing plants. Keeping work areas neat and orderly is a daily task. This includes but is not limited to maintaining passageways and floors free of slip and trip hazards; and removal of excess materials and fire hazards from work areas.

Good housekeeping is a basic part of accident and fire prevention.

Effective housekeeping is an ongoing operation: it is not a hit-and-miss cleanup done occasionally. Periodic "panic" cleanups are costly and ineffective in reducing accidents. Poor housekeeping can be a cause of accidents, such as:

- ✚ Tripping over objects on floors, stairs and platforms
- ✚ Being hit by falling objects
- ✚ Slipping on greasy, wet or dirty surfaces
- ✚ Striking against projecting, poorly stacked items or misplaced material
- ✚ Cutting, puncturing, or tearing the skin of hands or other parts of the body on projecting nails, wire or steel strapping



To avoid these hazards, a workplace must "maintain" order throughout a workday. Below are 11 tips for effective workplace housekeeping recommended by the National Safety Council.



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According to the Bureau of Labor and Statistics, slips, trips and falls were the second leading cause of nonfatal occupational injuries or illness in 2013. MSHA's Housekeeping Standard (56/57.20003) states at all mining operations, "workplaces, passageways, store-rooms, and service rooms shall be kept clean and orderly."

For example, floors should be kept clean and dry. Adequate drainage should be provided in wet areas. Workplace flooring (e.g. cement, ceramic tile and other materials) should be adequate based on the tasks being performed.

Preventing slips, trips and falls can be accomplished by following the recommendations below.

- Report and clean up spills and leaks immediately
- Keep aisles and exits clear of items
- Consider installing mirrors and warning signs to help with blind spots
- Replace worn, ripped or damaged flooring
- Use drip pans and guards

Supervisors and operators are encouraged to establish workplace audits and exams that address slip, trip and fall hazards.

1. Eliminate fire hazards

Flammable and combustible materials should be properly stored when not in use. Under 56/57.4104, combustible waste materials to include liquids "shall

not accumulate in quantities that could create a fire hazard." In addition, materials such waste or rags that contain flammable or combustible liquids that could create a fire hazard should be stored in covered metal containers for both surface and underground operations.

Some additional precautionary measures for fire safety recommend by the National Safety Council include:

- Keep combustible materials in the workplace to a minimum and only in amounts needed to complete the job.
- Store quick-burning, flammable materials in designated locations, away from ignition sources.
- Avoid contaminating clothing with flammable liquids. Change clothes if contamination occurs.
- Keep passageways and fire doors free of obstructions. Stairwell doors should be kept closed. Do not store items in a stairwell.
- Keep materials at least 18 inches away from automatic sprinklers, fire extinguishers and sprinkler controls.
- Hazards in electrical areas should be report, and work orders issued to fix them

Along with storage of flammable/combustible materials, clean up of any leaked or spilled flammable/combustible materials is of great importance when it comes to housekeeping and eliminating fire hazards. 56/57.4102 requires these materials to be removed or controlled in a timely miner to prevent a fire hazard.



2. Control dust

Mining operations can be considerably dusty, especially depending on the type of material being extracted. From nuisance dust to Silica, this hazard can present significant health risks if not adequately controlled through sound housekeeping practices.

According to the National Fire Protection Association (NFPA), using a vacuum when cleaning dust from surfaces is the preferred method. It is highly recommended to use vacuums with HEPA filters attached to further reduce potential exposures associated with dust. Other housekeeping methods used for dusty surfaces include wet sweeping or water wash-down. Avoid dry sweeping and under no circumstances compressed air or steam be used.

3. Avoid tracking materials

Perhaps one of the most difficult issue to control is spread of hazardous materials from one area to the next. This is especially true when it comes to Mercury in refinery operations. The best way to control this issue is through sound housekeeping practices. This means keeping the work area, to include equipment and surfaces as clean as a possible. In addition, it is important to establish cleaning protocols or hygiene control plan in areas where toxic or hazardous substances are present and cross-contamination should be prevented. Some these protocols can include providing coveralls and shower facilities, as well as clean rooms and dirty rooms. It is also important to note that employees that work with toxic materials should never wear their clothes home.

4. Prevent falling objects

When it comes to housekeeping, preventing objects from falling is accomplished using a number of methods. This includes the use of a toe board, toe rail or net to keep items from hitting equipment or more importantly, the worker.

When items need to be stacked, they should be stacked straight up and down to keep them from falling, and heavy objects should be stored on the bottom shelf.

In addition, workplace layout is an important factor to consider when stacking and storing items. Avoid stacking items in passageways and walkthrough areas. Stored items should not obstruct aisles, stairs, exits, fire equipment, emergency eyewash station/showers or first aid stations.

5. Clear clutter

Cluttered workplaces typically happen because of poor housekeeping practices. This type of workplace can lead to a number of issues to include ergonomic as well as injuries. It is important to develop practices where items like tools, chemicals, cords, and containers are returned to their appropriate storage location when not in use.

Failure to manage clutter can result in blocked aisles, stairways, emergency exits, electrical panels, and doors, can result in injuries as well as violations of various MSHA standards. One of the more common violations identified during inspections is overflowing trash receptacles. Best practice would be to empty the receptacles at the end of each shift or more frequently depending on the degree of use.



6. Store materials properly

Under 56/57/16001, supplies should not be stacked or stored in manner which creates tripping or fall of material hazards.

As addressed above, improper storage can lead to clutter which can result in materials being stored in front of electrical panels and/or fire extinguishers thus creating a fire hazard and violating several MSHA regulations. It is important to train employees on the proper storage of unused materials and equipment. In addition, operators should designate storage areas close to each work area. This will help ensure the work area itself does not become a storage area.

7. Use and inspect personal protective equipment and tools

Look at any industrial workplace and you will notice some reliance on Personal Protective Equipment or PPE. PPE usage can include safety toed boots, gloves, goggles, face-shields, hearing protection and respirators to name a few. While PPE usage is typically affordable and easy to implement while either waiting on the implementation of engineering controls or when these controls are not feasible, it use does not come without problems.

Many occupational injuries are the result of improper or inappropriate use of PPE as well as PPE that is not maintained. This is especially true when employees are completing housekeeping tasks and are either unaware of PPE requirements or have become complacent when completing these tasks. Employees should be trained on the type of PPE, when it is required to be used and periodic inspection requirements.

When it comes to tools, operators should implement inspection requirements in order to ensure unserviceable tools are removed from use and repaired/replaced. During inspections, damaged tools like hammers with broken handles, power tools with damaged cords, and ladders with damaged

rungs for example, are commonly identified and cited as safety defects.

Tool/equipment storage is another component of good housekeeping practices. It is important to establish storage areas like tool rooms, storage racks, tool benches or equipment yards. Once these areas have been established, employees should be instructed to return tools promptly, when not in use, in order to avoid clutter and lost equipment.



8. Determine frequency of housekeeping

All workers play an integral role in housekeeping. It is important to establish a housekeeping schedule. At a minimum, housekeeping should be done at the end of each shift. At this time workers should inspect, clean and remove unused or discarded materials. In areas where significant debris build up is possible, it is important establish a more frequent housekeeping schedule. It is important to train workers to keep their areas clean throughout the shift in order to minimize hazards as well as reduce the amount of time needed at the end of a shift to clean.

It can be said that a clean work area demonstrates the pride employees have with job and the culture of safety at a worksite.

9. Establish a written plan

Housekeeping, like other safety programs should be put in writing. This ensures the plan is formal and defined. The plan should contain protocols that identify the frequency, methods, tools and cleaners approved for use.

Once the written plan is established and approved, it is important to train all workers. It is a good practice to train workers initially and annually thereafter. If there are changes to the plan, it is important to ensure that information is provided to workers in a timely manner.

10. Think long-term

Housekeeping should be more than a one-time initiative! As mentioned above, it should be a daily task that is aimed at keep things cleaned and organized, and with the purpose to eliminate any safety and health hazards. In addition, it should be periodically monitored and audited.

It is also important to keep records, maintain regular walkthrough inspection schedules, report hazards and train employees in order to sustain the program. Finally, the National Safety Council recommends setting goals and expectation in order to measure program success.

IN SUMMARY: housekeeping is not just about cleanliness. It is an important element of any workplace safety and health program. It is designed to keep work areas clean and orderly while helping to eliminate workplace hazards and promoting a safer, more efficient workplace. A lack of housekeeping or poor housekeeping practices on the other hand, contributes to accidents by hiding hazards that cause injuries. The 11 tips discussed above are meant to guide the discussion on the importance of housekeeping, and to assist workplaces with the development of a housekeeping program.



QUIZ

1. Good housekeeping is a basic part of _____?
2. (T/F) Panic cleanups are low cost and an effective approach to housekeeping.
3. What was the second leading cause of nonfatal occupational injuries/illness in 2013?
4. Identify the appropriate containers for flammable/combustible wastes disposal for surface and underground.
5. When is it ok to use compressed air to clean dust surfaces?
6. When is washing work clothing contaminated with a toxic substance like mercury at home acceptable?
7. At a minimum, how often should trash containers be emptied?

Employee: _____ **Date:** _____

Mine/Company: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

If there is any specific topics you would like to learn more about please write on line below.
