

CHAPTER 2

OFFICE AND SHOP SAFETY

I. FACILITY SIGNS

Signs direct, inform and warn.

A. Safety Signs - Safety signs are necessary throughout the facility to identify hazards, give emergency instructions, alert individuals of danger and provide information.

1. Pumps and Fueling Islands

a. Diesel Pumps

- i. Need sign saying "DIESEL"
- ii. Need sign saying "NO SMOKING"

b. Gasoline Pumps

- i. Need sign saying "GASOLINE"
- ii. Need sign saying "NO SMOKING"

c. Surface Fuel Storage and Other Flammable Storage Containers

- i. Need sign saying "FLAMMABLE"
- ii. Need sign saying "NO SMOKING"

2. Electric Switches and Breakers

a. All switches other than light switches must be labeled as to what they control. These labels may be made in the facility with a typewriter, Dymo labeling tool, stencil, etc.

b. All electrical outlets other than 110 volts need labels indicating voltage. Labels may be made as indicated under electric switches and breakers.

3. Shop Grinders and Drill Presses - Need sign saying "DANGER" or "CAUTION, DO NOT OPERATE THIS MACHINE WITHOUT GOGGLES"

4. Air Compressor - Automatic starting air compressors need to be marked with a "CAUTION: THIS EQUIPMENT MAY START AUTOMATICALLY" sign.

5. Air Lines

- a. All main airlines must be labeled as to pressure.
- b. 30-psi outlets need to be labeled accordingly.
- c. Labels may be done in facility with stencils.

6. Cranes and Hoists - Cross-beam or extension beam should be labeled on both sides as to the maximum capacity of the unit. Facility-made stencils may be used.

7. Doors in Shops

- a. All doors opening to the outside must have "EXIT" sign over door.
- b. All doors not opening to outside need "NOT AN EXIT" sign over door.
- c. Where doors lead to basement, locker room, storeroom, etc., such doors should be labeled accordingly instead of following item (b) above.

8. Radioactive Material Storage Area - Fence around storage area needs "CAUTION RADIOACTIVE MATERIALS" sign on four sides and on the door.

9. Steam Cleaner Equipment

- a. A sign stating "ONLY TRAINED AUTHORIZED PERSONNEL PERMITTED TO LIGHT THE HEATER" will be posted on the door or outside the doorway that is always visible from the outside. If the equipment is not in an enclosure, post sign in the general proximity of the steamer unit.
- b. A "NO SMOKING" sign will be posted outside the entrance door.

10. Fire Extinguishers

- a. Need a sign above the fire extinguisher saying "FIRE EXTINGUISHER" (arrow, if on sign, pointed toward fire extinguisher in bracket).
- b. Need label for extinguishers showing type of fire "FOR B, C FIRES" or "FOR A,B,C FIRES".
- c. Need durable inspection label on extinguisher showing monthly and annual inspection. Must have initials of person performing inspection.

11. Wash Bay - Need "NO SMOKING" signs posted.

12. Arc Welding Equipment - Need a "DO NOT WELD WITHOUT EYE PROTECTION" sign on or immediately adjacent to the equipment.

13. Gas Welding Equipment - Need a "DO NOT USE WITHOUT EYE PROTECTION" sign posted on the equipment.

14. Battery Charger - Need a "NO SMOKING AREA" sign posted on the charger or in the immediate area.

II. SAFETY IN THE OFFICE

Carelessness on the part of office workers and those who frequent the office area can contribute to serious accidents. Observe the following safe practices and prevent injuries.

A. File Cabinets - Open and close file drawers with the handles, keeping the free hand clear of the drawer. Be careful not to catch articles of clothing or jewelry in the drawer. Close all file and desk drawers when not in use. Open no more than one file drawer at a time.

B. Look While Walking In The Office Or On Stairs - Refrain from reading while walking. Do not carry articles stacked high enough to interfere with clear vision of obstacles.

C. Stacking - Never stack or place heavy articles on top of file or supply cabinets. Store material on shelves.

D. Chairs - Use care when sitting in swivel chairs. Avoid leaning back too fast or beyond a safe angle. Never lean back in straight chairs.

E. Climbing - Use only good ladders or stools specifically designed for climbing to elevated points. Never climb on chairs, desk tops, boxes or other makeshift supports.

F. Electrical Cords - Floors must be kept clear of electrical or telephone cords. Plug-in boxes or conduit must be positioned to prevent tripping.

G. Fires - Matches or smoking materials must be placed in ashtrays or approved receptacles; not in waste baskets or laid on desks or tables. Know how to report a fire, giving location of fire to other office personnel and the building location to fire fighters. Everyone should become familiar with the location of the fire extinguishers and how to use them.

If you are caught in a smoke-filled area, crawl on the floor and take short breaths through your nose. If possible, hold a cloth in front of your face. Before opening a door, touch it to check its temperature. If it is hot, do not open it.

H. Space Heaters - Keep space heaters of all types a safe distance from combustible materials. Never leave them turned on while unattended.

I. Housekeeping - Good housekeeping is one of the best ways to keep hazardous conditions from developing. If every thing is put away it is easy to notice items or objects that represent unsafe conditions.

J. Emergency Numbers - Keep emergency telephone numbers for police, fire, ambulance and other medical aid available and in a place accessible to all employees. Update these numbers on a regular basis since they are subject to change. Refer to Cardinal Surveys Company Emergency Response Plans section, page 25.

K. First Aid Kits - Know where first aid kits are located. Periodic training in basic first aid and CPR are given by the Company in order to have personnel available that can render emergency aid.

L. Keep Furniture In Proper Repair - Repair sticky drawers, replace broken casters, and replace warped, cracked or broken seats on chairs. Warped, cracked or broken chair mats which create a tripping hazard must be replaced. Sharp burrs on metal furniture and splintered edges on wooden furniture must be replaced or repaired.

M. Office Incidentals

1. Supplies - items such as paper clips, staples and thumb tacks should be kept off the floor. Remove staples with a staple puller and dispose of the removed staples properly.

2. Envelopes and paper - use a moisture source to seal envelopes in order to avoid mouth cuts and germs. Avoid cuts by picking up individual sheets of paper at the corner, not at the side. Exercise caution when turning pages in a book or going through files.

3. Scissors - pass scissors handle first, blades together and keep them where they will not fall.

4. Pencils - handle sharpened pencils carefully. Do not place pointed objects upright in a container or in a pocket. Pocket protectors, for carrying pencils and pens are recommended.

5. Staplers and paper cutters - should be used with great care. Never force or overload them. Paper cutters are to be left in a closed and latched position when not in use.

N. Doors And Walkways

1. Opening doors - open doors slowly, expecting someone to be on the other side. If a door opens toward you, approach it from the side. When working alone, never carry items that prevent you from opening a door easily with your free hand.

2. Stairs - never run on stairs. Always hold the handrails when walking up or down stairs.

3. Corners - approach blind corners with caution, especially near coffee rooms, reproduction rooms and other heavily used areas.

4. Walkways - shall be kept free of tools, grease and oils to prevent slips.

III. SAFETY IN THE SHOP

A. General - It is the desire and responsibility of Company management to provide the safest possible working conditions for our employees. To do this, local management conducts periodic

shop inspections to ensure that the facility is being properly maintained and that unsafe conditions are eliminated. In addition to local management conducting safety inspections, it is the responsibility of each worker to prevent unsafe conditions from developing and to report any unsafe conditions that cannot be eliminated by the individual finding them.

Workers must be ever mindful of the responsibility they have to perform their duties in a manner that will prevent injuries to themselves and others as well as eliminating the waste that results from damage to our facilities and equipment.

Safety is a team effort. With each person making every effort to avoid injury and management working hard to provide the safest possible work environment, we can eliminate accidents and hazardous situations. An accident free work place is possible and should be every person's goal.

B. Protective Clothing - Dress properly for the job you will be doing. Do not wear loose or ragged clothing, long neckties, finger rings or dangling shoe laces. Wear gloves when handling rough or sharp objects. Wear eye protection when operating buffers or grinders. Wear safety shoes while on the job at all times and a hard-hat when there is any danger of head injury. Employees wearing prescription glasses should wear safety glass type for constant protection.

C. Housekeeping - Good housekeeping is one of the most important occupational accident prevention factors in any safety program. Good housekeeping at an operating district means providing a place for every useful item and keeping it there when not in use. A well kept shop is neat and orderly, with clean floors, clean windows and a generally fresh appearance. Dirty walls or lack of paint create an atmosphere of laxity which will have a negative effect on the people who work there and will result in neglect due to lack of pride. Good housekeeping is everyone's responsibility.

1. Job completion - no job is complete until tools have been cleaned and put away, scrap and waste have been disposed of and the equipment and location are in good orderly condition.
2. Open containers - if you open a door, can, box, container or drawer, close it when you are finished or must leave the area.
3. Spills - if you spill something, clean it up.
4. Remove hazards - if you drop something, pick it up.
5. Borrowing - if you move something, return it to its proper place when you are finished.
6. Hazardous materials - paints and flammable materials shall be stored properly. Chemicals shall be properly segregated and stored. All chemicals shall be in proper containers, clearly marked with proper identification labels.

D. Working under vehicles - When vehicle maintenance is to be done that requires the vehicle to be positioned so that people can work under it, a minimum of two support jacks must be placed under opposite sides of the frame or axle and part of the weight rested upon them to prevent the vehicle from moving. Make sure that the jack is adequate for the job.

E. Fires - Everyone working in or around our shops should be made aware of proper fire fighting and reporting procedures. In a shop environment the single most effective fire prevention procedure is to ensure the shop is free of combustibles. Items such as paint, paint thinner, oil and discarded rags and paper must be stored and / or disposed of properly.

Since our work requires the use of radioactive materials, extra care must be taken around these items. Rules against smoking in specific areas must be strictly enforced. (Refer to Cardinal Surveys Company's **Health Physics Manual**)

F. Posting - Specific areas of every shop have materials in them that require that we notify our workers and visitors of hazards that may exist. Certain areas of our shops are posted as "No Smoking" areas while others will have signs regarding our radioactive materials, gasoline or diesel storage as well as others. These signs must be obeyed.

G. Fork-Lifts - Operators must be fully qualified and become thoroughly familiar with a fork-lift before using it. The operator's manual must be read by the operator. The fork-lift itself should be inspected prior to use to ensure there are no adverse defects present. No fork-lift is to be used to lift objects weighing more than its rated capacity nor should the fork-lift be moved unless the load will ride smoothly. Keep loads close to the ground when moving them to prevent the fork-lift from becoming "top-heavy". Riders are expressly forbidden.

H. Wash Bay - Wash bays should be kept clean and oil-free. Each person who uses the wash bay is responsible for leaving it cleaner than he found it.

I. Yard Area - Keep clean and picked up, grassy areas mowed and fence lines free of weeds. Remove old tires, scrap iron and empty barrels. Ensure fences and gates are maintained. Yard lights are to be periodically inspected and burned out lights replaced.

J. Fuel Island - Special care is required when fueling company vehicles. Engines are to be turned off, tires chocked and parking brakes set. No smoking while fueling! Do not leave vehicle unattended while fueling.

K. Parking - Park in designated areas only. Concrete bumpers are provided to protect buildings and fences. Do not block doors, bays or driveways.

L. Security - Make sure company property is locked and secured when personnel are not present. Never lock a room or building until you have ensured building is empty of personnel.

M. Garage Bay Doors - Never leave a bay door partially open. Always leave a door in its full open or closed position.

N. Over Head Hoist - Operators must be fully qualified and become thoroughly familiar with an over head hoist. The operator's manual must be read by the operator. The over head hoist itself should be inspected prior to use to ensure there are no adverse defects present. No over head hoist is to be used to lift objects weighing more than its rated capacity nor should the over head hoist be moved unless the load will ride smoothly. Keep loads close to the ground when moving them to prevent dropping and damaging the load or injuring personnel. Riders are expressly forbidden.

O. Keep trash bins / barrels empty. Keep shop floor clean and free of oil & grease.

IV. FACILITY SAFETY INSPECTION

To maintain the Company Facility in a condition consistent with safety standards, inspections must be performed at regular intervals. Utilizing the Facility Safety Inspection form (copy located in Chapter 10 - Reports and Forms) a thorough review of the facility can be performed, which will help ensure the facility is maintained in safe operating condition. With the inspection form as a guide, any items found to be unacceptable are to be corrected.

V. SIGNAGE CLASSIFICATIONS

As a result of the Occupational Safety & Health Act and in accordance with CFR 1910.145, the specifications for accident prevention signs and tags define design, application and use of signs or symbols. The following are five (5) of the OSHA safety sign classifications which are utilized by Cardinal Surveys Company:

A. **DANGER** - The heading "DANGER" is to be in white letters on an oval red background, superimposed on a rectangular black background at the top of a white sign. "DANGER" is used to indicate a hazardous situation which has a high probability of death or severe injury. Danger should not be considered for property damage accidents unless personal injury risk is present. All employees shall be instructed that danger signs indicate immediate danger and that special precautions are necessary.

B. **WARNING** - The heading "WARNING" is to be in black letters on an orange background, superimposed on a rectangular black background at the top of an orange sign. "WARNING" is used to indicate a hazardous situation which has some probability of death or serious injury. Warning should not be considered for property damage accidents unless personal injury risk is present. All employees shall be instructed that warning signs indicate a possible threat of death or severe injury and that special precautions are necessary.

C. **CAUTION** - The heading "CAUTION" is to be in yellow letters on a black background at the top of a yellow sign. "CAUTION" is used to indicate a hazardous situation which may result in minor or moderate injury. However, Caution should not be used when there is a possibility of death or serious injury. Caution should not be considered for property damage accidents unless personal injury risk is present. All employees shall be instructed that caution signs indicate a possible hazard against which proper precaution should be taken.

D. **NOTICE** - The heading "NOTICE" is to be in white letters on a blue background at the top of a white sign. "NOTICE" is used to indicate a statement of company policy as the message relates directly or indirectly to the safety of personnel or protection of property. Notice should not be associated directly with a hazard or hazardous situation and must not be used in place of "DANGER", "WARNING" or "CAUTION".

E. **SAFETY INSTRUCTION** - The heading ("Safety First", "Be Careful" or "Think") is to be in white letters on a rectangular green background at the top of a white sign. General Safety Signs ("Safety First, Be Careful, Think") should indicate general instructions relative to safe work practices, reminders of proper safety procedures and the location of safety equipment.

NOTE: All signs shall be furnished with rounded or blunt corners and shall be free from sharp projections. The ends or heads of bolts or other fastening devices shall be located in such a way that they do not constitute a hazard.