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Did you
know?



AUDITING SAFETY AND HEALTH ON THE JOB

KEY ISSUES

The purpose of safety and health audits in the workplace is to root out hazards and unsafe work practices before accidents occur and, through the recommendation and correction process, eliminate those hazards and correct unsafe work practices. Effective safety audits are a report card on the effectiveness of a safety and health program.

The importance of management understanding and support for an audit activity before embarking on such a program cannot be overemphasized. A safety and health audit program should not be undertaken unless management is fully prepared to correct unsafe conditions and work practices uncovered by the inspections, including setting aside money and manpower for the job.

An effective safety inspection or audit activity will also help managers, supervisors, and safety committee members become more knowledgeable about hazards in their work area. This increased awareness should allow these key hazard fighters to spot hazards more quickly and correct danger spots.

ANALYSIS AND GUIDELINES

Safety inspections provide an additional opportunity to involve more employees in the safety program. Employees who take their turn performing safety audits are more enthusiastic about safety and become ambassadors of safety to other employees.

A well-planned audit activity should provide a consistent method of recording observations, use inspection time most efficiently, and reduce the possibility that important items may be overlooked.

People who know the jobs best, such as supervisors and employees, can help develop the "what to look for" – the potentially unsafe conditions and unsafe work practices – that is the guts of a good audit program.

(1) Unsafe Conditions and Unsafe Acts

When managers think of developing a safety inspection program, what often comes to mind is an attack on hazards, dangerous equipment, and other unsafe conditions. That is a key part of the program but not all of it.

Nearly 90 percent of work injuries are caused by unsafe acts. A principal ingredient of an audit program should be to include unsafe acts or dangerous work procedures for inspection, correction, retraining, counseling, or even disciplinary handling.

(2) Inspection Format

Developing an inspection format of what to look for is central to the effectiveness of the audit activity. Handing inspectors a clipboard with a blank piece of paper will bring in few constructive recommendations. An effective audit form should raise specific questions in the minds of inspectors as they make their rounds.

The audit format should avoid broad, encompassing questions that are likely to



produce broad, general recommendations. Specific audit questions should be used to generate focused recommendations.

Audit reports should be prepared carefully and reviewed by legal counsel to maximize the possibility of achieving a privilege against disclosure to outside organizations such as the Occupational Safety and Health Administration. The inspection report should list the specific defect or unsafe act reported and the corrective action recommended.

What to include in the format. Creating an effective inspection format that focuses on both unsafe conditions and unsafe acts need not be a laborious process. Ingredients already developed may be available, such as:

- Results of the hazard investigation and identification activity
- Fire prevention and protection reports;
- Reports from the insurance carrier's loss-control consultant who completes safety tours of the facility;
- OSHA inspection and citation reports;
- Local programs instituted to meet regulatory requirements such as lock-out, tag-out procedures, hearing conservation rules, respirator training and enforcement; and
- Job safety analyses developed for jobs in the facility which list hazards as well as the correct, safe, work procedures.

(3) Who Should Inspect

A safety and health manager is probably the person who knows most about inherent hazards, unsafe conditions, and the potential for injury in a facility. Yet that professional may not be the best person to conduct regular safety and health checkups.

A key ingredient to success in an audit program is involvement and participation by line managers and supervisors who are responsible for safety in their own departments. Other companies ask safety committee members or department safety representatives to conduct the audit activity. Still other organizations find it effective to mix supervisors and safety committee members in the audit activity. Whatever approach is most effective, members should be trained in the company policy and procedure of safety auditing and what exactly they will be asked to audit.

(4) How Often to Inspect

The traditional monthly safety inspection tour is inherent in the safety programs of many companies. Other organizations schedule weekly inspections focusing on various areas of the facility or highlighting one element of the safety program. For example, those areas might be forklift department safety, fire protection, ergonomic hazards throughout the facility, electrical dangers, and machine guarding status.

A facility's accident record and the hazards involved in the process should dictate to a large degree the frequency and depth of safety audits.

(5) What to Inspect

In smaller facilities, a safety and health audit can cover the whole facility regularly. But as the complexity of the operations and the number of employees increase and the size of the facility expand, it may not be possible to conduct a complete, thorough audit on each tour. In such situations, wise managers put quality ahead of the quantity, limiting the tour to a reasonable number of departments where in-depth inspections can take place. Managers can also alternate full "general



inspection tours" with focused inspection checklists that emphasize specific items such as potential electrical hazards, ladder and scaffold safety, or employee work practices for handling chemicals.

(6) Types of Safety Audits

Two approaches to safety and health inspection activities generally prevail – the general plant audit and the specific department or hazard inspection activity. The former is usually thought of as a broad overview of general hazard potential and work practices in the facility. This approach is perhaps the best way to launch an audit program.

Specific audits tend to deal with exactly that – the specifics, either by department or function, covering subjects in depth. For example, these subjects might be driving safety, a review of safety orientation practices for new hires and ergonomic assessment of various workstations.

While some hazards are common to most facilities audit inspection forms should be tailored to the specific exposures in the facility.

(7) Prioritizing Recommendations

An effective audit activity should recognize that inspections will gather all sorts of recommendations. Some will involve emergency situations where life and limb could be endangered and must be corrected immediately. Other recommendations can be put on a descending scale of importance which can be handled routinely through maintenance scheduling. Some high-cost changes and improvement items will require capital funds and approval from high levels of management.

Some companies ask the auditors to rate the importance of the particular hazard or unsafe act uncovered: immediate (I), serious (S), or scheduled for next maintenance repair (M). Other organizations use a 1, 2, 3, or 4 priority listing, with 1 being the most important and requiring immediate attention.

(8) Training Safety Auditors

Many safety auditing programs are launched with good intentions, but the results are poor because time has not been taken to train safety inspectors in what the company wants and what to look for in the tours. A short training session of two hours or less should cover management safety philosophy. The purpose of the safety auditing program, who will be auditors, how often the inspections will occur, the time frame allowed for the tour, supervisors' role with audit reports, and the follow-up required by higher management levels.

Good safety auditing should also involve a tactful approach by inspectors to both supervisors and workers. Auditors should be trained to avoid confrontation with employees who resent a person's "spying" in his or her work area or watching for unsafe practices. The investment of a few hours in orientation and training will pay off in quality audit results.

(9) Occupational Health on the Job

Preventive occupational health is often regarded as the recognition, evaluation, and control of factors that affect the health of the employee on the job. Only about 5 percent of all reported work injuries and job illnesses are from job-related illnesses, yet these can become the most costly type of incident.

Some conditions are often difficult to relate to a work cause and may truly be the result of off-the-job exposures. However, new occupational health information is being developed all the time.

Management needs to be concerned about occupational health because nearly 1,000 new chemicals enter the marketplace each year and new chemical



combinations and new processes present a large array of possible hazards.

(10) What Causes Illness on the Job

A harmful agent can gain entry into the body in one of three ways:

1. *Inhalation.* This involves breathing into the lungs, possibly allowing a harmful agent to pass into the bloodstream and reach the brain.
2. *Absorption.* This occurs through the skin, particularly if the skin surface is cut or damaged, or, in the case of some chemicals, damage to the skin results from direct contact with the surface.
3. *Ingestion.* This is the process of swallowing materials. In the workplace, people may unknowingly eat or drink harmful chemicals. For example, people working around lead should not eat or smoke in the work areas. Careful hand washing is required before eating and at the end of each shift to avoid having lead dust ingested when eating or smoking.

Stresses. A number of factors in the workplace (called stresses) can cause sickness, impaired health, discomfort, or inefficiency. These factors are frequently classified as chemical, physical, biological, or ergonomic.

Chemical Hazards. These can arise from excessive concentrations of mists, vapors, or gases in the air in the form of dust or fumes. Besides the hazard of inhalation, many of these materials can act as skin irritants or may be absorbed into the skin.

Physical Hazards. These include excessive levels of radiation, noise, and vibration and extremes of temperature and pressure.

Biological Hazards. These can come from insects, molds, fungi, and bacterial contamination of food and water.

Ergonomic Hazards. These stem from poorly designed work areas or hand tools, improper lifting or reaching, or repeated motions in an awkward position.

(11) Ways to Reduce Hazards

Exposure to hazards may produce an immediate response (acute exposure) or may come from longer exposure at a lower intensity over time (chronic exposure). Exposure to small amounts of some substances may cause serious health problems while exposure to large amounts of some other substances may not cause any serious health problems.

Industrial Hygiene Survey. When health hazards are suspected on the job, the best way to evaluate those hazards is through an industrial hygiene survey. That involves having an industrial hygiene specialist monitor air or water samples. The specialist makes a judgment of the magnitude of the hazard and compares measurements to well-established contamination limits or to OSHA's permissible exposure limits.

Hazard Controls. Controlling hazards involves reducing them either through engineering controls, administrative controls, work practice controls, or personal protective equipment. The aim is to enable workers to tolerate the exposure without impairment to health or productivity. The following are key factors that should be involved in an organization's approach to occupational health.

Basic First Aid and Emergency Procedures. Preserving occupational health can be as basic as establishing first-aid procedures. For a worker injured on the job, competent first-aid treatment frequently minimizes the extent of the injury and, when necessary, gets the employee promptly into expert medical hands.

First-aid supplies and procedures can range from a first-aid kit for a small office



group to broader coverage of first-aid attendants, occupational health nurses, medical staff, and standby ambulance coverage.

It is critical to train first-aid staff and supervisors to handle medical emergencies and injuries. This training needs to be backed up with written procedures. More than one management group has been embarrassed within the facility and in the public press through lack of training in handling emergencies – not to mention the lack of quick help for the injured employee.

The following basics should be developed:

- Emergency contact telephone numbers should be readily available to medical personnel, first-aid personnel, and supervisors;
- Medical and first-aid personnel should be trained in highlights of OSHA Blood Borne Pathogens Standard with a written program summarizing the activities and annual retraining should be planned.
- A local “company physician” should be retained who has training and a background in occupational medicine; and
- First-aid and medical personnel should work under written “standing orders” from the physician.

Training is available in most localities through the local emergency medical service, the American Red Cross, or local fire department training resources. The small amount invested in this type of training will pay off many times over in a staff that is confident handling emergency situations and shows it when an event occurs.

Outside medical providers play an important part in maintaining control of the recovery progress of injured workers. These outside providers should be invited to the facility, tour the operation and get to understand the jobs involved. These are important steps when the physician is considering returning an injured employee to the regular job or an alternate, light-duty job until the employee is fit to resume normal work activities.

Employees trained in first aid are more safety conscious than the average employee and have significantly lower accident rates themselves. These people are also excellent candidates for the safety committee. Time and again, first-aid personnel add to the overall safety consciousness of the facility.

Special Attention to Occupational Illnesses. Here are some tips to keep in mind about job illnesses:

Knowledge of Chemicals. Employees should know what materials they are working with and what illnesses can be caused by overexposure. A valuable guide to exposures is the material safety data sheets (MSDSs) for all chemicals in use in the facility.

Patterns of Illness. Employees should watch for patterns of not feeling well – perhaps health problems that occur while at work but clear up on weekends or during vacations. Or it may be a health problem that occurs to employees on a certain job or in a given department.

Noise Levels. Continued exposure to high noise levels can damage hearing. A company should try to reduce noise levels through engineering improvements and controls; employees should be trained to wear ear protection, fitted carefully into the ear canal, or to use ear muffs banded snugly against the ears.

Protection Outdoors. Working outdoors involves exposures that require protection. In cold weather, protective clothing should be worn as exposure of the extremities and the human face to cold can produce frostbite. In foul



weather, protective rainwear and boots should be available because exposure to damp cold for long periods can damage the circulation of extremities and produce 'trench foot.'

In hot weather, high temperature and humidity can produce heat cramps, heat stroke, or heat exhaustion. Salt tablets can help for some conditions, but heat exhaustion and sun stroke require prompt medical attention.

Protection From Chemicals. Some chemicals cause dermatitis by removing the fat that normally helps to protect the skin's surface. Protective gloves, aprons, boots, and other clothing items can protect from dermatitis exposure. Barrier creams may be effective in protecting from some chemicals.

Personal Equipment. Personal protective equipment (PE) is important for protecting workers on the job. Employees should make sure that the PPE fits comfortably and is kept clean and maintained in good working order. If a defect is suspected, it should be reported and the PPE fixed or replaced.

Exhausts. Exhausts, vents, and hoods should always be used when provided. Make sure that these exhaust devices are in good working order and filters are cleaned regularly.

Hygiene. Personal hygiene and good health off the job are important. Washing hands before eating and before leaving work are sound hygiene practices. Having work clothing laundered and kept separate from street clothing is also important. Good personal habits of eating and drinking and regular exercise will also help employees keep well.

Assessing Health Hazards. Occupational illnesses account for only a small number of the postings of OSHA 300 logs, but their workers' compensation cost implications can be many times higher than those for many types of work injuries.

If there is concern, a wise employer should ask for a health hazard evaluation. Large organizations with in-house medical staff and industrial hygienists are able to tackle such problems quickly.

Smaller companies may have to hire outside resources through local industrial medical clinics or industrial hygiene services, or from medical specialists such as occupational dermatologists, audiologists, physical therapists or ergonomists.

Some companies take advantage of services available through state departments of health or divisions of industrial hygiene which perform this service without charge to the employer and involve management and employees in their survey work. The National Institute of Occupational Safety and Health (NIOSH), with its limited staff and resources, offers the same type of service on a selective basis.

(12) Starting a Safety Inspection Program

Safety inspections or audits are an integral part of a safety and health program and can provide management with valuable input on the progress and performance of their safety activities. Safety inspection programs do require some planning and management and employee time, but they do not have to be complicated or cumbersome. Loss-control representatives from workers' compensation carriers can often assist in the development of a basic program.

Factors to be considered include the following:

How Frequently Will Inspections be Conducted? Many organizations conduct a once-a-month safety inspection tour. Some companies conduct safety audits more frequently, while many smaller organizations rely on a quarterly inspection for safety hazards.

Who Will Conduct the Inspections? Membership of safety inspection teams



varies widely in the plants, distribution centers, and offices in the United States. In some organizations, safety committee members tour their own departments trying to spot hazards that need to be corrected. Other companies assign this task to supervisors; still other organizations find value in combining supervisors with safety committee members to gain the advantage of two points of view to the inspection.

What Will be Covered in the Inspections? In some safety tours, the facility is inspected from wall to wall, covering every department and operation. In other settings, the inspection team limits itself to departments with which its members are knowledgeable, leaving the more technical inspections to persons such as electricians, hydraulic operators, and environmental specialists. Still other companies vary the inspection pattern by focusing on the hazards of operational conditions in one inspection, then devoting the next inspection to specific conditions such as an adequacy of light, condition of floors, and machine guarding.

How Will the Follow-up of Inspection Activities Take Place? The simplest approach to generate follow-up after an inspection is to have the team members leave a copy of the inspection report with the department supervisor for review and follow-up. This gives the supervisor an opportunity to correct the conditions promptly within the department. Additional follow-up may then be exercised by the next-level supervisor or the results of the inspection reviewed at the next safety committee meeting.

Setting Priorities for Correction of Hazards and Unsafe Work Practices.

Some hazardous items and unsafe acts can be corrected in moments, sometimes right on the spot with a friendly word of caution to an employee. Other corrections may take time, such as scheduling maintenance services or setting up refresher training activities.

Alert organizations assign priorities to safety inspection items. This may be as simple as a 1, 2, or 3 priority designation or the use of a red sticker (high priority), an orange sticker (fix within 24 hours), or a yellow sticker (the repair should be accomplished at the next equipment shutdown).

Whatever approach the company decides on should fit in with the management style and culture of the organization and ensure that the safety audit becomes an effective safety management tool.

(13) Preparing for Emergencies

Whether it is a tornado, an earthquake, an explosion, a fire, or a bomb threat, industry has found that formal emergency preparation plans can save lives and avoid millions of dollars of potential loss. On the other side of the coin, weak emergency plans or the complete lack of crisis planning can turn these incidents into real disasters.

Emergency planning allows key personnel to contain the problem so that it does not spread, decreases the chance of injury to employees, and prevents panic that can make a bad situation even worse. Key personnel are far more likely to carry out emergency measures on an orderly basis if properly trained and the training reinforced through regular practices or mock evacuations.

Emergency-preparedness activities should be part of an overall approach to employee and facility safety and loss prevention that will minimize accidents and workers' compensation claims.

