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Technical Information Paper Series
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The Safety Audit: A Management Tool

A major soft drink bottler, concerned about ergonomics and lifting hazards, implemented a safety audit process to identify hazards, guide management, and improve training. Improvements, including better equipment and safer work routines, have led to a reduction in employee injuries.

At a Midwestern salt processing plant, a safety audit team focused on ways to reduce the risk of burns to employees working with hot melt packaging adhesives. The team's recommendations for alternative products and processes led to a safer work environment, fewer injuries, increased efficiency, and reduced costs.

After an internal safety audit, a major chemical processing company initiated improved surveillance of certain machinery operations. The safer processes led to earlier detection of machine problems, reduced downtime, and lowered repair costs.

Top management at a plastics plant that employs 215 workers, in deciding to make safety a priority, implemented a comprehensive safety program that included safety audits for each shift. The improvements were dramatic: a reduction in annual lost work days from 562 to 8, a reduction in the annual number of accidents from 119 to 45, and a significant savings in workers' compensation premiums.

What is a Safety Audit?

A *safety audit* is a proactive process by which an organization is able to continually evaluate and monitor the progress of its safety and health programs. Audits are designed to rate an organization's total safety and health program, identify its strengths and weaknesses, show where improvements are needed, and obtain commitment and target dates for correcting problems. In addition to assessing safety violations and work conditions, an audit assesses senior management's philosophy and attitude towards safety.

The primary objectives of a safety audit are to:

- *Confirm* that safety, health, fire, and/or environmental program activities and controls are in place and functioning.
- *Verify* that the facility is in compliance with internal benchmarks, consensus standards, and/or government regulations.
- *Assess* past and current practices to identify and correct safety impediments which, if left unresolved, may result in personal injuries, property damage, or business interruption.

Benefits of Safety Audits

An effective safety audit can be used by management to uncover safety and health problems *before* personal injuries, property damage, or business interruptions occur.

A safety audit also serves as a visible process that management can execute to demonstrate to employees that they are interested in their safety. It is also a morale builder. Employee involvement and self-interest provide positive contributions to the audit process and to the overall organization.

A safety audit uncovers unsafe conditions and poor work practices, which are the principal causes of accidents. Thus, the safety audit process can reduce illnesses and injuries, and associated medical, insurance, and litigation costs.

In addition to improving the safety and health of employees, the audit process can also improve business operations. It can maintain, and in some instances, *increase* productivity, by reducing interruptions caused by accidents. It identifies conditions where machinery, equipment, or tools need repair or replacement, thus increasing the efficiency of the business operation. The bottom line is that an effective safety audit contributes to improved quality, productivity, performance, and profitability of a business.

Types of Safety Audits

There are two basic audit type approaches: *general* and *specific*. The *general audit* is a facility-wide audit that focuses on basic hazards and their controls. For example, a general audit would include a review of the building's interior and grounds (overall housekeeping, condition of steps and walkways, parking lots, lighting, etc.). This type of audit approach is broad-based and affects the entire facility.

The *specific audit* identifies safety hazards in a department or operation, or on a single piece of equipment. This type of audit is particularly useful in high hazard operations or where there is a high frequency of accidents. The specific audit is detail-oriented and time-consuming. Examples of specific safety audits include evaluating employee eye and face protection programs; inspecting compressed gas cylinders, hoses, and nozzles; and identifying appropriate fire protection measures in a cutting and welding operation.

In order to be effective, the audit, whether of the general or specific type, must be continuous and aligned with the day-to-day operations of a company. An ongoing audit process is an excellent mechanism by which management can obtain measurable and meaningful data about the organization's safety and health programs. In contrast, a one-time, single audit (e.g., an annual safety audit) is simply ineffective in that it only provides a snapshot of the overall status of safety and health programs at a point in time. Companies that have effective safety audits use, and alternate between, general and specific types.

Safety Audit Participants

First and foremost, senior management must support and participate in the safety audit process. They should endorse the process verbally and in writing to all employees. This lets employees know that senior management is serious about safety audits and is committed to allocating appropriate resources.

There is no industry standard that indicates who should conduct safety audits. Variables in the size and type of business, number and expertise of employees, and special hazards/operations characteristic of each business will dictate which staff are assigned to the audit program. A large organization may use a safety director to implement and oversee the entire program. In other organizations, a team approach is

used, mixing facility and line managers, supervisors, engineering personnel, and employees from various departments. Finally, an outside organization can conduct the audit. Insurance carriers, government agencies, engineering firms, and safety consultants are commonly used.

To determine who is best for the job, consider:

- The type of safety audit that will be conducted (general versus specific)
- Experience and availability of employees
- Time requirements and constraints of employees
- Special hazards and operations at the facility
- Experience and cost of outside consultants

Training of Participants

All participants must have a fundamental understanding of the safety audit process. At a minimum, they should have an understanding of the:

- objectives and the mechanics of the safety audit process
- two basic audit types, (specific vs. general)
- benefits of safety audits
- documentation requirements
- OSHA's role

Training needs can be expanded to include specific areas like accident investigations, back injury protection, personal protective equipment, lockout/tagout, and machine safeguarding. The safety director and facility manager are good candidates to develop and conduct training programs. The training agenda and programs must be customized to meet the specific needs of the facility.

Documentation

The safety audit must be documented in two major portions. The first part involves checklists; the latter part involves the final report.

Checklists are an integral component of the overall safety audit. These forms should suit the organization and the type of safety audit (general and/or specific). In the planning stages, key employees should be involved to ensure that all safety programs, operations, and hazards are addressed. At a minimum, include checklists for housekeeping, smoking, personal protective equipment, machinery/equipment and hand tools, fire safety, electrical safety, and chemicals.

At the end of this paper is a checklist that you can use to help you identify areas to include in your safety audit. The checklist covers general safety programs and regulatory compliance; facilities and equipment; and specific hazards and operations.

The second portion of the documentation, the final report, identifies the safety audit findings, makes observations and recommendations, and offers an overall opinion. The report should provide detail on specific suggested enhancements to remedy deficiencies, and should highlight serious and "repeat" observations.

The final report should be communicated to management in a timely manner. Management should take ownership of the audit results and should approve improvements to safety and health programs, processes, and equipment.

OSHA's Role

The federal Occupational Safety and Health Administration (OSHA) does not specifically require that companies conduct safety and health audits. However, some companies have taken the initiative due to provisions of OSHA's catch-all "general duty" clause (Section 5(a)(2) of the Occupational Safety and Health Act) The general duty clause states:

(a) Each employer-
(1) shall furnish to each of its employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to its employees.
(2) shall comply with the occupational safety and health standards promulgated under this Act.
(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this act which are applicable to its own actions and conduct.

When companies do choose to conduct safety and health audits, they must be prepared to remedy hazards that are uncovered in the audit process. During their inspections, OSHA inspectors can access internal safety and health records, including records of safety audits. If negative findings of an audit are identified, and if a company has chosen *not* to act upon them to abate hazards, OSHA can issue citations and penalties for safety violations. Therefore, upon the review of the final report, management must take the next logical step to correct any safety hazards the audit process reveals.

Conclusion

An effective safety audit is a tool that can be used by management to uncover safety and health problems *before* personal injuries, property damage, or business interruptions can occur. The safety audit can only be effective when:

- Senior management supports and participates in the safety process.
- Participants take a strong self-interest so that they can make positive contributions to the audit process and to the overall organization.
- Participants are properly trained in the overall safety audit process and in specialized areas (e.g., accident investigations).
- Companies use and alternate between specific and general audit types.
- The process is continuous and is in line with day-to-day operations.
- Management follows up and corrects any problems the audit process reveals.

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant.
Visit The Hartford's Loss Control web site at http://www.thehartford.com/corporate/losscontrol/

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Safety Audit Checklist

This checklist can help you identify safety programs you may need for your operations or facilities; however, it may not list all programs or areas which you need to consider.

Risk Management Programs	OK	Not OK	Tested	Regulatory Compliance Needed?	N/A
Safety Management and Regulatory Compliance					
Accident Investigations					
Accident And Injury/Illness Records					
Americans With Disabilities Act (ADA) Compliance					
Drug Testing / Substance Abuse					
Hazard Identification And Analysis					
Job Training (Specialized)					
Occupational Safety And Health Administration (OSHA) Compliance					
Product Safety And Recall Programs					
Return-To-Work / Light Duty					
Safety Audits					
Safety Meetings					
Safety Program					
Facilities and Equipment					
Building Utilities (HVAC, Electrical)					
Compressed Air Equipment					
Elevators, Stairs, And Walking Surfaces					
Emergency Response Plan					
Equipment Safety (Policies, Maintenance, Repairs)					
Fire Prevention And Protection					
Grounds Maintenance (Sidewalks, Driveway, Parking, Fences, Lighting)					
Housekeeping (Trash, Walkways, Aisles, Floor Maintenance, Tripping Hazards)					
Indoor Air Quality					
Life Safety and Evacuation					
Loading Dock Safety					
Safety for Visitors, Contractors, etc.					
Security					
Slip And Fall Prevention (Rugs/ Mats, Floor Care, Unmarked Elevation Changes, Etc.)					
Stairs (Railings, Treads, Lighting)					
Vehicle Preventive Maintenance					

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Risk Management Programs	OK	Not OK	Tested	Regulatory Compliance Needed?	N/A
Specific Hazards Or Operations					
Back Injury Prevention					
Bloodborne Pathogens					
Confined Space Entry					
Construction Safety					
Cranes (Chains, Hooks, Overhead Loads, Slings)					
Drivers (Selection, Training, Supervision)					
Electrical Safety					
Ergonomics Training					
Fall Prevention and Protection					
First Aid, CPR					
Forklift Safety and Operator Training					
Hazard Communication					
Hazardous Materials Inventory					
Hazardous Materials Training (Handling, Transportation, Storage, Disposal)					
Hearing Protection					
Industrial Hygiene Assessment and Monitoring					
Laboratory Safety					
Laser Safety					
LockOut / TagOut (LO/TO)					
Machine Guarding					
Material Handling					
Material Safety Data Sheets (MSDSs)					
Office Safety (Drawers , Electrical, File Cabinets Secured, Etc.)					
Painting Areas (Ventilation, Explosion-Proof Fixtures, PPE)					
Personal Protective Equipment					
Pre-Construction Evaluation					
Scaffold And Ladder Safety; Work Platforms					
Shiftwork / Work Schedules					
Thermal Conditions (heat, cold)					
Tool Safety					
Trenching					
Video Display Terminal Ergonomics					
Welding, Cutting, Hot Work					
Workplace Violence Protection Program					
Other Operations Specific To Our Facility:					