

Conducting Health & Safety Audits that Protect Employees and Businesses

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Each year thousands of people are seriously injured at work due to workplace accidents. Some never return home, victims of tragic accidents. These accidents may forever change the individual injured, their families, and the businesses they work for. Many of these accidents could be prevented had a thorough health and safety audit been performed and the appropriate follow-up action taken. Health and safety auditing is an important tool that can identify flaws in a company's written programs and physical conditions that could lead to serious accidents, and/or identify issues with employee behaviors that could result in injuries. Because of its ability to prevent serious accidents and injuries, health and safety auditing should be an integral part of any company's health and safety program.

One of the first questions to arise when it comes to health and safety auditing is why bother to conduct one in the first place? Perhaps a better question to ask is why not? One of the toughest questions that a health and safety professional will ever face is why they didn't do something to prevent the accident from occurring in the first place. A few years ago, I had an experience where this was made very clear. I was contacted by a plant where they had had a fatality. The fatality was a worker who had worked for the company for many years. He died while working in a confined space. In general, the employee was sent into a tank to clean it before it was finished and painted. The worker entered the tank with a solvent-based cleaner and a half-face respirator. He thought he had everything he would need to protect himself. The employee entered the tank to clean it as he had done many, many times before. He didn't realize that the respirator he had been assigned could easily become saturated with the vapors he was working with and become useless, nor was anyone left outside to keep an eye on him should anything go wrong. The tank was solid steel and so tall that it was not possible to see what was happening in it without being on a ladder. Sometime while working in the tank the worker was overcome by cleaning vapors and passed out, the vapors were heavier than air and consequently settled near the bottom of the tank where the worker had fallen. He was quickly overcome and died. No one knew what had happened until the next morning when they began showing up for work. They noticed that the worker's car was still in the parking lot. Thinking that this was strange, the employees began to look for the missing worker. When they entered the building they noticed that his toolbox and tools were still located next to the tank where he had left them the day before. One of his coworkers climbed the ladder next to the tank to peer down in; he will never forget what he saw: it was the body of his co-worker lying lifeless in the bottom of the tank. He immediately called 911 but it was too late.

My first visit to the plant was on the morning the funeral of the fallen worker was held; the funeral was held that afternoon. I was asked to review the company's health and safety practices and procedures and make sure that something like this never happened again. I quickly discovered that the company had no written respirator or confined space program. In the process of correcting the situation I conducted several training courses, including classes on confined space entry and general confined space awareness for all of the workers at the plant. After each class, as I often do, I asked if there were any questions. At the end of one of the classes I got one of the toughest questions I think I've ever gotten as a health and safety professional. One of the workers asked why they had not been doing this, referring to the proper confined space entry procedures, before. The coworker knew that if they had, this terrible death could have been prevented. I did not have a good answer, this was one of the few times that I was left speechless, but I knew had they conducted a health and safety audit these deficiencies could have been identified and corrected, and perhaps this terrible accident would never have occurred. This accident remains with me today as a reminder of why conducting health and safety audits is so important.

There are two basic types of health and safety audits: formal and informal. Formal audits are those developed by the company itself and/or an outside consultant. These audits are more or less checklists that go through the various company requirements, Occupational Safety and Health Administration (OSHA) standards, and/or other health and safety guidelines established by ANSI or other professional organizations. They are very thorough and complete. Most formal audits are computer-based and in most cases Internet-based so deficiencies identified can be tracked from anywhere in the world. Because they're a checklist, the individual completing the audit does not need a lot of experience in health and safety auditing; however, they often require significant training and experience with the program before becoming proficient. They also require a significant amount of time in the field because they most go through the step-by-step process. It is not unusual for a formal audit to take several days or up to a week or more to complete. When completed, the facility being audited can be confident that all the items or areas have been evaluated. Most formal audits focus on the written programs relevant to health and safety; only a few include reviewing the unsafe acts and/or conditions that may exist in the workplace. An informal audit on the other hand is just the opposite. There is no checklist to be completed so informal audits tend to take less time; but to be effective and thorough, they must be performed by a person with significant experience in the health and safety field. In addition, because there is no checklist it is possible that items could be missed. Informal audits can usually be completed in one to two days depending upon the size of the facility and operation in place. Because an informal audit is performed by an experienced health and safety professional, it usually is more proficient at identifying issues associated with unsafe acts or conditions in the workplace. Whichever type of audit is ultimately selected, the facility being audited can rest assured that they will be better informed and prepared to prevent serious accidents and injuries than had an audit not been performed.

There are several steps to conducting any health and safety audit; they include the following:

1. Initial research
2. An opening walk-through survey
3. A records and program review
4. A detailed walk-through inspection

5. A review of findings

6. Follow -up

Each of the items listed above is discussed in more detail below.

Prior to arriving on site, there are several things that an auditor can do to make the audit move along more efficiently. One item is to send a pre-audit questionnaire to the facility to be audited. This allows the facility to preplan by having a list of the programs and procedures to be reviewed. This will allow the facility to have many of the programs already prepared for the auditor prior to the site visit. This will save a tremendous amount of time, as one of the biggest wastes of time is waiting for relevant programs and paper work to be found. Another practice that can help with the pre-audit is to review the company's website. Most company websites will give the reader a very good understanding of the products or services produced by the company. This also gives the auditor an understanding of what to expect prior to arriving on-site: such as the products produced, the chemicals used, and manufacturing procedures that might be expected. Finally, it is helpful to review any regulatory action that has been taken against the facility.

The Occupational Safety and Health Administration's website has information on establishment inspections. This information is located at: www.OSHA.gov/oshstats/index.html. By entering the facility's name, location, and dates desired for the search the auditor can identify concerns that have arisen during previous OSHA inspections at the site. This is helpful in that it can identify areas where the facility has had issues in the past. It can also be used to determine if those problems were corrected. However, in order for this type of search to be useful, the facility has had to have had an OSHA inspection. Sometimes, if the facility has not had an inspection, a competitor's name (i.e., a company that performs the same type of work) can be used in the search. This will help the auditor identify potential concerns that the sector may have as a whole. With all of this information in hand, the auditor is well-prepared to visit the site and begin the audit.

No one likes to be audited. Just the word "audit" brings up thoughts of the Internal Revenue Service (IRS) audit, as many people know these can be extremely painful in that they usually identify areas where income has been underreported or taxes not paid. In the end, the individual may end up paying a substantial amount of money. A health and safety audit, although very different from an IRS audit, often renders the same thoughts in people's minds. They often see the auditor as a person who is unfamiliar with their business and the day-to-day requirements. They believe that the auditor will only identify problems or failures that will make them personally accountable for; therefore, they may see it as a personal attack. For this reason, it is very important to have an opening conference.

The opening conference should occur before anything else takes place on the site and include all responsible parties. This meeting will set the stage for the entire audit that follows. If handled poorly, it can make for a very difficult and unpleasant event. It is at this meeting that the auditor can change this perception. Therefore, in addition to identifying how the audit process will be carried out, it is best for the auditor to present himself or herself at this meeting as a person that is there truly to help and not just point out faults. It is also important for the auditor to point out that it would be virtually impossible for someone who does not practice health and safety on a day-to-day basis to be familiar with all of the rules and regulations that are currently in place. Therefore, it is not unusual for the audit to identify potential issues based solely on the magnitude of requirements currently in place. Instead of looking at the audit as an adverse situation,

the auditor should encourage all parties involved to look at the situation in a positive light. After all, the audit could prevent governmental citations, but more importantly it might prevent someone from being seriously injured or killed while at work. Once everyone understands that this is the true driver of the audit, they will be more likely to assist and participate in the process.

Immediately following the opening conference is an ideal time to conduct a preliminary walk-through of the facility. This will allow the auditor to get an idea of the manufacturing process, materials and use, and general work conditions. It is also during this time that the auditor will begin to get an initial idea of the health and safety practices at the facility and the written programs that will be need to be in place. Items such as general conditions and cleanliness will become apparent. Observing the use of personal protective equipment (PPE), such as head protection, safety glasses, gloves, hearing protection, etc., will indicate the need for a PPE hazard assessment and employee training.

Insight into other programs such as confined space entry and fork truck training may also become apparent. For example, an indication that a facility has a good confined space program in place might be indicated by the warning signage required on all confined space entrances. Likewise, paying attention to how the fork trucks are parked can be an indication of how efficient the company's fork truck training program is. If the fork trucks are parked in a designated area, with the keys out of the ignition, and the forks resting flat on the ground, this is often an early indication that the facility has an excellent fork truck training program in place. Of course, if the items above are not noted, it could be an indication of just the opposite. The initial walk-through therefore gives the auditor an initial base to work with and possibly an early indication of things to come.

After the initial walk-through has been completed, it is recommended that the review of records and programs begin. One of the first items to be reviewed should be the OSHA 300 logs. For the most part, these logs contain information on the facility's serious accidents and injuries. Usually the last five years of 300 logs should be available and reviewed. By reviewing these documents the auditor will get a general sense of the accidents and injuries that have occurred and perhaps be able to identify patterns. For example, injuries related to employees reaching into live machinery may be a sign of a problem with the facilities lockout/tagout program. Likewise, an excess of back injuries may be the indication of some ergonomic concerns. From the 300 logs, the auditors review should branch out into the other areas where written programs would be required.

One program that virtually all facilities are required to have is a hazard communication program (Hazcom) or what is sometimes referred to as a "Right to Know" program. This program basically consists of a written program that dictates how employees are to be informed of the chemicals in their workplace, the handling and labeling of such chemicals, and how employees can protect themselves against the chemicals they may be exposed to. This program also requires that the employer develop a written inventory of all the chemicals present and have material safety data sheets (MSDSs) available. In addition, the program requires that chemicals be labeled appropriately when they are moved from their primary container to a secondary container, such as a spray bottle. Another written program that is required by nearly all facilities is an emergency action plan. This program outlines what employees are to do, and who they are to contact, in the event of an emergency. Most basic plans will address fire, tornadoes and/or earthquakes and include evacuation maps which are to be posted throughout the workplace. Other more comprehensive plans will address emergencies such as bomb threats, terrorist threats, violence in

the workplace, power failures, chemical spills, etc. The emergencies that may need to be covered will depend upon the workplace. The emergency action plan should also address fire extinguisher usage and in some cases spill response.

The Hazcom and emergency action plan are just the beginning of the programs that may need to be reviewed. Many other programs may be required. These will depend upon the type of facility and work being performed there. These may include the following:

- Asbestos Hazard Awareness
- PPE (Personal Protective Equipment)
- Respirator usage
- A hearing conservation program
- Blood-borne pathogens
- Fork truck safe operator training
- Lead hazard awareness
- Lockout/tagout (LOTO)
- Confined space identification and training
- Electrical safety
- Spill response
- Crane and hoist operation and safety

Of course other programs not listed above may also be required. It is not possible to go into the requirements of each of these programs individually. If the reader is interested in the requirements of these programs it is recommended that the reader become familiar with the specific OSHA standards or in some cases the associated American National Standards Institute (ANSI), National Fire Protection Agency (NFPA) or other trade organization recommendations. As discussed previously, for someone who is new to the health and safety field and not familiar with the requirements of the OSHA standards or trade organization guidelines, a checklist or formal audit may be most appropriate.

With the initial walk-through and review of the written programs completed, it is appropriate to conduct the detailed walk-through of the facility since the auditor now has a very good understanding of the facility's history, processes, and associated health and safety requirements. The primary function of the detailed walk-through is to determine how well the facility has implemented its programs and address other items that may not be captured in the program review such as machine guarding, housekeeping, the use of fall protection, electrical concerns, etc. Depending upon the physical condition of the facility, this portion of the audit can be the most time consuming. For example, a facility that was constructed in the 1950s with machinery that was manufactured around the same time may have significant issues with asbestos and machine guarding. Other items that should be addressed during the detailed walk-through should include the following:

- General housekeeping
- Walking surfaces
- Exit markings and illumination
- Electrical issues
- Fire protection
- Material handling
- Machine guarding
- Emergency showers and eyewashes
- Flammable liquids storage
- Stairs and ladder usage
- Fall protection
- Fork truck usage

Once again, similar to the program review listed above, this is not a complete list, other items may need to be reviewed depending upon the specific practices or procedures performed at the facility. It is not possible to go through each of the items listed above to identify the issues that should be addressed.

Some of the most common unsafe conditions observed during a detailed walk-through are associated with general housekeeping, machine guarding, or electrical systems. General housekeeping is self-explanatory. Any areas where the walkway is slippery, wet, or impassable due to the accumulation of oils, water, equipment, or waste could be considered a violation of the OSHA housekeeping requirements. Machine guarding can be a bit more challenging. Sometimes machine-guarding violations are very clear, such as when guards have been damaged or more commonly removed and never replaced. A more difficult task is determining if the guarding on a particular machine is appropriate when all of the manufacturer-installed guards are in place. This is particularly true of older machinery that was manufactured when the guarding requirements were not as strict as today's. As a general guideline, if an employee is able to place any part of his or her body into the machine's point of operation, guarding is presumably required.

The auditor should become familiar with the guarding required of various pieces of machinery. This information is available from OSHA or other sources, such as ANSI. Sometimes the machinery manufacturer is a good resource, especially if the same type of machinery is still manufactured. Seeing how the newer equipment is guarded can also be extremely helpful. It is also important to note that any guard that opens so the employee can access a part of the equipment must be interlocked. An interlock is a device that stops the machine if contact is broken; several different types of interlocking devices are available today. Examples of electrical issues that are commonly cited include: obstructing electrical panels (OSHA requires at least 36 inches of clearance in front of all electrical disconnect panels), unlabeled electrical disconnects, exposed bus bars inside of electrical panels, and exposed electrical wiring (i.e., live wiring found outside equipment panels or electrical junction boxes). Of course, there are many more issues that can be identified during a detailed walk-through. As stated previously, if the reader is interested in the other topics outlined above it is recommended that the reader become familiar with the specific OSHA standards or various trade organization recommendations.

Other items that the auditor should be on the lookout for during the detailed walk-through are unsafe acts performed by employees. Examples might include working on live machinery or walking on moving conveyors, not using fall protection when working at heights, horseplay, etc. Since human behavior is very unpredictable, the number of unsafe acts is infinite. It is important to note these behaviors as well during the detailed walk-through.

Collecting digital photographs of the unsafe conditions or acts noted during the detailed walk-through is encouraged, as they can be extremely helpful in identifying the location and/or concern by the individuals assigned to correct them at a later date.

At the conclusion of the audit, the auditor should compile all of his/her findings and present them to the interested parties. This is sometimes referred to as a closing meeting or closing conference. It is important that the auditor start this meeting on a positive note, if at all possible. This is done to show that the facility is meeting some of its obligations. No one likes to be told that all of their efforts have only resulted in negative effects. This will also tend to put the meeting on a positive footing. After the auditor has reviewed the positive findings, the serious

concerns that were identified during the audit should be reviewed and solutions offered on how the deficiencies can be corrected. There should be no surprises for anyone when the final report is issued.

After the audit report has been issued, it is crucial that some type of follow-up be initiated, simply noting problems and never correcting them is not helpful to anyone. The auditor can help in the follow-up procedure by assigning hazard rankings to all of the items identified. This can be very helpful in scheduling of the corrective actions. The timeliness of the follow-up depends upon the seriousness of the issues identified. All follow-up should be clearly documented. Someone should be assigned to ensure that the follow-up has indeed taken place. This may be the auditor or someone at the facility who has been assigned this task. Follow-up should occur a few weeks or a few months after the final audit has been completed. For serious items, the follow-up should occur as soon as possible, if not immediately.

Regular auditing should be an integral part of any health and safety program. The audit should consist of both a program review and walk-through of the facility. Whether a formal or informal audit is used, it can help a facility identify issues that could result in serious accidents or injuries. Correcting any deficiencies noted in the audit can eliminate these concerns, thereby reducing serious injuries to workers and the associated business costs. Best of all, everyone goes home healthy and happy at the end of the day.