

Welcome to the SafetyPro podcast, Episode 2, Introduction to Worksite Analysis. If you recall, I am doing a series of episodes covering some basic start-up safety topics to get folks going managing safety in their businesses. If you recall from episode 1, I started everyone off by talking about how to prepare to write your safety manuals. I covered the following 8 points:

1. Keep sentences short and concise and to the point but not choppy.
2. Use the term "you" to convey ownership
3. Use active verbs.
4. Avoid technical jargon
5. Say what you mean in plain language
6. Avoid the legalese
7. Revise your first draft at least once, and edit it several times, if possible.
8. Ensure that the written manual is complete.

I also discussed the fact that you have to be able to keep a long-term perspective when writing your policies and procedures.

- Work from the top down! Get top management commitment first! This cannot be a middle-management project.
- Encourage Employee Involvement, which creates buy-in!
- Continuously provide training, don't just issue the policies and procedures, you know, set it and forget it!
- Develop a measurement and reporting system to track progress, gaps, etc.
- Provide effective communication when rolling out your written program!
- Don't expect quick and dramatic results within days or even weeks of implementing your written manuals! It's an investment!

So before you can begin writing the actual manual you need to know which hazards may be present in your workplace or that your employees may be exposed to during the course of their work.

So in order to do any of this, you need to assess the physical workplace as well as job tasks for potential hazards. If you already have safety policies and procedures in place, but it has been a while since they were implemented and reviewed, you can compare the current state of safety to the expected state based on those policies and procedures. This is often called a gap assessment; you find gaps in what is versus what should be based on established programs.

So for Episode 2, I will go over a basic **Worksite Analysis or Hazard identification and Assessment**

According to OSHA, each employer must assess the workplace to identify all hazards; evaluate new equipment, materials, and processes; and review safety and health information. This would need to be done initially, then I always recommend at least once every year or when workplace conditions change. Assessment records must be kept and made available to OSHA upon request-employers with 10 or fewer employees are exempt, but a good best practice is to have this done no matter how many employees you have!

A worksite assessment means that managers and employees analyze all worksite conditions to identify and eliminate existing or potential hazards. Worksite assessment involves a variety of worksite examinations to identify not only existing hazards, but also conditions and operations in which changes might create hazards.

From these assessments an employer can then develop hazard prevention and control methods. The following five major areas form the basis from which good hazard prevention and control can develop:

1. **Surveys:** for Industrial Hygiene surveys, at a minimum, all chemicals and hazardous materials in the workplace must be inventoried, the hazard communication program must be reviewed, and air samples analyzed. For many industries, a survey of noise levels, a review of the respirator program, and a review of ergonomic risk factors are needed.

Employee safety survey: Here is where a perception survey or safety culture survey can help. Many companies offer this service. You need to craft a survey that addresses the concerns management has as well as the hazards associated with your business/operations.

2. **Change Analysis:** Anytime something new is brought into the workplace, whether it be a piece of equipment, different materials, a new process, or an entirely new building, new hazards may unintentionally be introduced. Before considering a change for a worksite, it should be analyzed thoroughly beforehand. Change analysis helps in heading off a problem before it develops. You may find change analysis useful when:

- Building or leasing a new facility.
- Installing new equipment.
- Using new materials.
- Starting up new processes.
- Staffing changes occur.

3. **Hazard Analysis:** Hazard analysis techniques can be quite complex. While this is needed in some cases, frequently a basic, step-by-step review of the operation is sufficient. One of the most commonly used techniques is the Job Hazard Analysis (JHA). Even if jobs were originally designed and set up with safety in mind, many bad habits or short cuts may have been introduced along the way. When done for every job, this analysis periodically puts things back on track. I will have a SafetyPro episode dedicated to safety analysis soon.

Other, more sophisticated techniques are called for when there are complex risks involved. These techniques include: WHAT-IF Checklist, Hazard and Operability Study, Failure Mode and Effect Analysis, and Fault Tree Analysis for example.

4. **Safety and Health Inspections:** Routine site safety and health inspections are designed to catch hazards missed at other stages. This type of inspection should be done at regular intervals, generally on a weekly basis, depending on the size and scope of your particular business. In addition, procedures should be established that provide a daily inspection of work areas.

You can use a checklist already developed or make your own, based on:

- Past problems.
- Standards that apply to your industry.

- Input from everyone involved.
- Your company's safety practices or rules.

Important things to remember about inspections are:

- Inspections should cover every part of the worksite. Including parking lots, docks, back doors, fence lines, driveways, storage areas, electrical panels, fire extinguishers, severe weather gathering areas, etc. Don't just inspect commonly accessed areas or just where workers perform their tasks.
- They should be done at regular intervals.
- In-house inspectors should be trained to recognize and control hazards.
- Identified hazards should be tracked to correction.

Information from inspections should be used to improve the hazard prevention and control program. Conducting safety inspections (or commonly called safety audits) is a dedicated topic for which I will spend an entire episode covering. So be sure to subscribe on iTunes, Stitcher for Android or even via RSS feed on my website so you don't miss any valuable episodes.

5. A records review: **Employee Reports of Hazards:** Employees play a key role in discovering and controlling hazards that may develop – or that already exist – in the workplace. A reliable system for employee reporting is an important element of an effective safety and health system. The workplace must not only encourage reporting, but must value it.

It is often helpful to establish multiple ways to report hazards so that, depending on comfort level and the nature of the issue, there are several avenues to get concerns addressed. Examples include: supervisor chain of command, safety and health committee member, voice mail box and a suggestion box.

An effective reporting system needs:

- A policy that encourages employees to report safety and health concerns,
- Timely and appropriate responses to the reporting employee,
- Timely and appropriate action where valid concerns exists,
- Tracking of required hazard correction,
- Protection of reporting employees from any type of reprisal or harassment.

An Accident/Incident Investigations Process review is also needed

Accident/incident investigation is another tool for uncovering hazards that were missed earlier or that slipped by the planned controls. But it's only useful when the process is positive and focuses on finding the root cause, not someone to blame!

All accidents and incidents should be investigated. "Near-misses" are considered an incident, because, given a slight change in time or position, injury or damage could have occurred.

Six key questions should be answered in the accident investigation and report: who, what, when, where, why, and how. Thorough interviews with everyone involved are necessary.

The primary purpose of the accident/incident investigation is to prevent future occurrences. Therefore, the results of the investigation should be used to initiate corrective action.

The final action recommended is to conduct an analysis of injury and illness trends over time, so that patterns with common causes can be identified and prevented. Review of the OSHA injury and illness forms is the most common form of pattern analysis, but other records of hazards can be analyzed for patterns. Examples are inspection records and employee hazard reporting records.

Injury and Illness Records Analysis:

- Since there must be enough information for patterns to emerge, small sites may require a review of 3-5 years of records. Larger sites may find useful trends yearly, quarterly, or monthly.
- When analyzing injury and illness records, look for similar injuries and illnesses. These generally indicate a lack of hazard controls. Look for where the injury or illness occurred, what type of work was being done, time of day, or type of equipment.

Analysis of Other Records:

- Repeat hazards, just like repeat injuries or illnesses, mean that controls are not working. And, patterns in hazard identification records can show up over shorter periods of time than accidents or incidents. Upgrading a control may involve something as basic as improving communication or accountability.

Ok, so you get the idea, look at anything and everything your employees or even the public can access. Look at job tasks that are performed, the tools and equipment needed (including any chemicals), emergency procedures that are in place or lacking, how you would respond to an injury, look at repair/maintenance records, work orders, etc.

Then you can begin to see where your major hazards are, your minor hazards, and may even uncover where policies. Procedures, and even training is needed based on feedback from employees and your observations of their work. You can then take to paper with this information to write policies, procedures as well as determine which engineering controls, work practices, or personal protective equipment will be needed. Those are the three options you have when dealing with hazards; known as the hierarchy of controls:

1. Engineering or elimination
2. Work practices/administrative controls
3. Personal Protective equipment

The hierarchy provides a systematic way to determine the most effective, feasible method to reduce risk associated with a hazard. When controlling a hazard, you should first consider methods to eliminate the hazard or substitute a less hazardous method or process.

This is easily done when designing a facility or process before it is actually in place. If this is not feasible, engineering controls such as machine guards and ventilation systems should be considered.

This process continues down the hierarchy until the highest-level feasible control is found. Often, a combination of controls is most effective. In cases where the higher order controls (elimination,

substitution, and implementation of engineering controls) do not reduce risk to an acceptable level, lower order controls, (e.g. warnings, administrative controls, or personal protective equipment) are used to complement engineering controls to reduce risks to an acceptable level. But personal protective equipment should always be considered LAST!

For example, if an equipment modification or noise enclosure (engineering control) is insufficient to reduce noise levels, then limiting exposure through job rotation and using hearing protection would be an acceptable supplemental means of control.

So get started documenting these things, then you can begin writing! Remember, review the 5 areas:

1. Surveys
2. Change analysis
3. Hazard analysis
4. Safety inspections
5. Records review

I will cover specific safety topics, much like chapters in your safety manual, in subsequent episodes. You will be able to follow along as you continue to build on your written safety program.

If you have the SafetyPro App for Windows, iOS and Android you will be able to download all of this information as well as some generic, sample checklists to use in conducting your workplace safety audit.

Otherwise, as always, you can subscribe via [iTunes](#) or the [Stitcher](#) App for Android. And of course, you can always listen online at www.consulthoffmann.com. Our podcast is safe for work, so tell your co-workers to tune in as well so they can learn about workplace safety management!

And if you have a topic you would like me to discuss, or if you have a workplace safety question, go to my site and let me know!

Until our next episode, stay safe!