Job Hazard Analysis Meeting

Meeting Objectives

To demonstrate how to study a job step-by-step in order to identify existing or possible hazards and determine how best to reduce or eliminate them. The result should be greater awareness of job hazards, greater effort to improve safety performance, a reduction in accidents or "near misses," and an increase in productivity.

Suggested Materials to Have on Hand

A sample job hazard analysis form and checklist. (Note: Use a fairly simple job that many of your workers perform regularly—for example, operating a particular machine or packing materials for shipment.)

Introduction/Overview

Our safety training, including safety meetings, usually focuses on known job hazards—especially one that is regulated by OSHA. We pay close attention to understanding the possible hazards and safety procedures for these tasks, equipment, or substances—and they deserve it.

But just as accidents at home are often the result of everyday tasks gone wrong—like slipping in the shower—so are accidents at work. Injuries and other incidents often result from things we don't think of in terms of hazards because they seem so simple and uncomplicated.

There can be potential hazards in any task or even in the way we organize the workplace or the way we behave on the job. One way to call attention to these easy-to-miss risks and make sure that we don't ignore any safety or health hazards is to perform a job hazard analysis.

A job hazard analysis is a process where you and I work together to really analyze a particular job you're doing. We create checklists to help us take a close look at the conditions under which the job is performed. Then, again with the help of a checklist, we break the job down into steps and examine each step for possible hazards. Next, we look for ways to eliminate those hazards, either with safety equipment, by changing the way the job is performed, or by adding special precautions.

A job hazard analysis is not an evaluation of your performance, but of the possible hazards in the job. It's a good way to take a fresh look at what we do—and hopefully, find ways to keep ourselves safer and healthier.

General Hazards

When we think about which tasks we want to consider for job hazard analysis, we look first at the ones that have caused accidents and injuries. The more problems we've had, the higher on the list that job goes. Right after jobs that have actually led to reported accidents or injuries are those that have had "near misses." We want to find the problem before someone gets hurt.

Other good candidates for job hazard analysis are new tasks or processes or jobs where changes have been made in processes and procedures. Ideally, we'd like to conduct a job hazard analysis for every job we perform.

You can't set up hard and fast rules for the steps of a job hazard analysis, because every one—like every job—is different. But there are some basic steps to follow. Before you start going through the job itself step-by-step, it's usually a good idea to perform a pre-analysis check.

In a pre-analysis, we look for possible hazards in the general conditions under which you're performing the job. To do that, we create a checklist of questions to make us really look for potential hazards in the work area. We might ask questions like these:

- Are chemical containers kept covered when not in use?
- Are emergency exits clearly marked?
- Are fire alarms and portable extinguishers readily available?
- Are noise levels high enough to interfere with communication?
- Are there live electrical wires?
- Are tools, machines, and other equipment in good repair?
- Could materials on the floor cause people to trip?
- Do machines have guards in place?
- Do the "no smoking" rules obeyed around flammables, open flames, or sparking tools?
- Have there been complaints of headaches, dizziness, or respiratory problems?
- Is personal protective equipment available, in good condition, and used when necessary?
- Is the work area ventilated?
- Is there adequate lighting?

Using a checklist of questions like these can often help call attention to hazards that don't register with us as we go about our work. The hazards may not relate to a specific job, but that doesn't mean they can't cause injuries or other serious problems. You don't want to wait till you trip over packing materials on the floor or can't find a fire extinguisher when you need one. Hazards like that have to be identified and fixed no matter what type of job you're doing and analyzing.

Identifying Hazards

Once general work area hazards have been studied and analyzed, the process moves on to taking a close look at the specific job you're doing. We break the job down into steps, including enough details to describe what you do—but not so many that you need pages and pages to say it.

When I say that we break the job down into steps, I mean every step that you follow. That includes inspecting and putting on protective clothing and equipment, organizing the work area, and setting up for the job. It includes the machinery and equipment you're using, the condition it's in, and the ways in which it's used.

The checklist would also cover the exact way you perform the job, literally step-by-step. It would list the parts and materials required, and how they're organized, located, and used. We'd note when equipment has to be shut down and how that's done. And we'd cover any potential hazards that are created while performing the job, such as dust, chemicals, heat, and excessive noise.

Once the steps are listed, I'd watch to see exactly what you do in each step. Since the goal is to identify hazards—or possible hazards—that could harm you, you have to perform the job in your normal way. I'm not going to evaluate how well you perform your job; I'm looking for hazards that can be reduced or eliminated to make the job safer.

The goal here is to try to be as objective as possible and look at the job as if seeing it for the first time. As you perform the tasks, you would mentally do the same thing. In order to identify hazards, we have to ask questions about each part of the job—and answer those questions honestly!

If, for instance, we're analyzing a job that involves using a machine, we might ask questions like these:

- Are materials located in places demanding lifting that could cause back strain or injury?

- Are there any risks of falling to another level?
- Could the way materials are placed, or operations conducted, cause objects to fall or fly across the room?
- Does the job create dust, chemicals, heat, excessive noise, or other hazards?
- Does the job include movements that could cause hand or foot injuries?
- Does the machine have any exposed parts, such as sharp edges, that could cause injury?
- Does the task ever place the operator in an off-balance position?
- Is all protective clothing and equipment inspected before use to be sure it's in good condition?
- Is appropriate protective equipment, such as safety goggles and work shoes, being used?
- Is the job organized in a way that demands moving faster than is comfortable?
- Is the machine locked or tagged out when repair or maintenance work is performed?
- Is the machinery adequately guarded? What about any open areas or work positions around the equipment?
- Is the operator wearing any loose clothing or jewelry that could get caught in the machinery?
- Is there a risk of being injured while reaching over moving machinery or materials when the job is performed?
- Is there any possibility of getting caught in or between machine parts?

You get the idea, I'm sure. The point is to try to think like a hard-nosed safety inspector, really examine every part of the job as if it's brand new, and look for hazards. Sometimes the analysis will turn up something obvious, like a missing machine guard. Other hazards may be less noticeable, or they may seem less important. But no hazard is unimportant. The point of job hazard analysis is to uncover anything risky that could happen while performing the job—and then take action to prevent it.

Protection against Hazards

Once we have looked at every possible aspect of the job and listed every hazard or potential hazard, it's time to figure out what to do about these problems. In this part of the analysis, we carefully study each hazard we've identified, along with the job step or steps associated with it.

Sometimes we may be able to figure out a different way to perform the job, one that would eliminate the hazard. You might, for instance, be able to combine several steps or perform the steps in a different order that would be less hazardous.

As an example, suppose we notice that during a particular step of a process, you have to lean over moving machine parts to reach some needed materials. That's a hazard, because there's a risk of injury if your clothes or a body part gets caught in the machine.

We might decide that the best way to eliminate that hazard is to move those materials before the machine is turned on. If that's the case, we would work together to write up new job steps, describing exactly what has to be done to perform the job safely. Just saying "be careful" doesn't make it. These steps have to be specific, so you—or anyone else who performs the job—will know just what to do.

Another way to eliminate hazards—or at least reduce them—is to use additional equipment or take other precautions. You might eliminate a lifting hazard by getting a hand truck. You could deal with a hazard of possible falling materials by wearing a hard hat. Or you might add a new first step to the job: carefully checking all personal protective equipment before you put it on to be sure you're not wearing scratched safety goggles or a dented hard hat.

Other ways of reducing hazards might include changing tools, adding machine guards or ventilation, or making

other physical changes.

If we can't find a way to reduce a particular hazard, we would probably consult with other safety experts in the company. Every so often, we may find that none of the approaches we consider quite do the trick. If no one can figure out how to reduce the hazards we find in a particular job, we'd probably look for a way to do the task less often—or maybe even eliminate it altogether.

Finally, even the best job hazard analysis needs to be reviewed periodically. If there's an accident or injury involving the job that's already been analyzed, we'd certainly do another analysis immediately. But even if nothing happens, the second go-round may reveal something that was missed the first time. Or we simply may come up with better ideas on how to make the job safer.

Safety Procedures

Job hazard analysis is an excellent way to identify hazards and reduce the chance of accidents and injuries in a particular job or task. But it's also a technique that you can adapt and use on the job all the time. If you learn to look objectively at your work and workplace, you can find—and fix—hazards and improve safety even without a checklist.

As you go through each workday, keep asking yourself: "What could go wrong here?"

Look for the types of general hazards we discussed earlier, such as whether there's enough lighting in the work area or if materials left on the floor could trip people.

Keep an eye out for hazards every time you use a piece of equipment or work with a substance—in other words, in every job situation. Be especially alert to certain types of hazards. For instance:

Fire and Explosion Hazards

- Are circuits overloaded?
- Are combustible materials kept away from lights and machinery?
- Is all welding and cutting done in well-ventilated, fireproofed areas or areas that are screened off?
- Is flammable scrap kept in covered, airtight metal containers?
- Is the insulation on any wires frayed?

Chemical Exposure

- Are chemical containers kept closed when not in use?
- Are chemical containers left in places or positions where they might spill?
- Are MSDSs available for all substances?
- Do all containers have labels?
- Is protective clothing and equipment available and inspected to be sure it's undamaged?
- Is there enough ventilation in areas where chemicals are used?

Housekeeping to Prevent Slips, Trips, and Falls

- Are aisles and stairways clear?
- Are cords, cables, and air hoses kept above floor level?
- Are drawers kept closed?
- Are leaks and spills cleaned up promptly?
- Is trash disposed of promptly and properly?

This is, of course, only a partial list. The bottom line is that you must not ignore anything that doesn't look right

or smell right or, for some reason, just doesn't "feel" right. Your instincts could help prevent an accident. Try to figure out what the hazard is and what can be done to correct it. If you're not sure, ask me.

Last, but definitely not least, remember that not all hazards are unsafe conditions. Some are unsafe acts. And that's a type of hazard that every single person can and must prevent.

If you don't bother to read a chemical container label or MSDS, that's an unsafe act. Failing to follow instructions on the label or MSDS is an unsafe act, too. Other unsafe acts that are real hazards in any workplace include:

- Failing to use assigned protective clothing and equipment.
- Removing a machine guard.
- Smoking in a prohibited area.
- Speeding through the plant on a forklift truck.
- Wearing contaminated work clothing out of the work area.

Most unsafe acts, however, are more a matter of attitude. People act unsafely because they don't take the time to think about hazards or because they don't take the hazards or safety seriously. But just as hazardous as any open chemical container or unguarded machine are unsafe acts like these:

- Assuming safety is someone else's responsibility, not yours.
- Being afraid or embarrassed to ask questions.
- Concentrating more on personal concerns and problems than the job at hand.
- Doing a job on "automatic pilot."
- Fooling around or showing off on the job.
- Skipping steps or cutting corners on job procedures.

It's just as important to identify these hazards as it is the unsafe conditions we covered earlier. If you're the one who's acting unsafely, do something about it right away. If someone else is acting unsafely, quietly point out the risk. If the other person doesn't get the point, you can bring the problem to my attention.

The point is that job hazard analysis is a tool, just like any other. While most tools are used to perform a specific job, job hazard analysis is a tool that helps you do any job safely.

Suggested Discussion Questions

1. Are there any other questions?
2. How would you define job hazard analysis?
3. If you had to pick one job or task for job hazard analysis, what would it be and why would you choose it?
4. What are a few general hazards you would check for in a pre-analysis?
5. What are examples of questions you would ask about a specific job you perform?
6. What are some specific unsafe acts to watch out for?
7. What are some specific unsafe conditions to watch out for?
8. What are some ways we might reduce or eliminate a hazard uncovered during a job hazard analysis?
9. What's the key question to ask when you apply job hazard analysis techniques to your work on an ongoing basis?
10. What is the value of job hazard analysis?

Wrap-Up

Job hazard analysis is a technique we can use to make our workplace and ourselves safer. Remember, it's not an evaluation of your performance but of the job itself. Job hazard analysis lets us look objectively and systematically at what we do to identify any possible hazards in the way a job is performed so we can make

changes and do the job with less risk of accidents or injuries.

Job hazard analysis also offers us a way to look at everything we do with new eyes. When you continually ask, "What can go wrong here?" you make it a lot less likely that anything will go wrong.

Of course, it's not enough to just identify and analyze hazards. We also have to do something about them. But the step-by-step approach of job hazard analysis makes it more likely that we'll be able to spot the hazards and, by pinpointing just where the problem lies, figure out ways to do our jobs more safely.