SOLID WASTE JOB HAZARD ANALYSIS

Presented by:

Ross Muir
Environmental Health, Safety and Training Administrator

SFSWMA
Santa Fe Solid Waste Management Agency

WHY CONDUCT A JOB HAZARD ANALYSIS?

A job hazard analysis (JHA) can prevent work-related death, injuries or illnesses by eliminating or controlling identified hazards.

It is a means to ensure that workers have the training, equipment and supplies to do their jobs safely.

HAZARD AWARENESS

When conducting a job hazard analysis, you may need to take a fresh look at the way things are done at your workplace.

Even though you may hear “we’ve been doing it that way for years and nothing happened,” it doesn’t mean a hazard doesn’t exist.

UNSAFE BEHAVIOR

Unsafe behavior leads to unsafe conditions that can cause accidents.

- Equipment operating too close to another piece of equipment.
- Debris on the tipping floor obstructing walking surfaces can cause slipping, tripping.

UNSAFE BEHAVIOR

Unsafe behaviors show weakness in the safety management system.

- Failure to implement SOPs and training.
- Failure to notify management about different PPE needs.

JOB HAZARD ANALYSIS - JHA

A job hazard analysis focuses on the relationship between the

- Worker
- Task
- Tools, and
- Work Environment

as a way to identify hazards before they occur.

WORKER, TASK, TOOLS, WORK ENVIRONMENT

- Worker = equipment operator.
- Task = load, transport, dump, spread, compact, cover trash, grade roads, dust suppression.
- Tools = front-end loader, transfer truck, bulldozer, compactor, motor grader, and water wagon.
- Work Environment = landfill, transfer station, MRF, green waste/composting area

JHA PROCEDURE

- Review accident history.
- List, rank, and set priorities for hazardous jobs.
- Conduct walk-through job review.
- Outline the steps or tasks.

ACCIDENT HISTORY

Look at jobs where workers have been injured using existing information from:

- Your accident or incident reports
- Your worker compensation claims
- Industry or trade association data

JHA PRIORITIZATION

- Jobs with the highest injury and illness rates
- Jobs that have the potential to cause serious injury
- Jobs in which one simple human error could cause injury
- Jobs complex enough to have written instructions
- Jobs that are new to your facility
- Jobs that had significant changes in process or procedure

OUTLINE THE STEPS

- Watch the employee perform the job and list each step as the worker takes it.
- Be sure to record enough information to describe each job action without getting overly detailed.
- Avoid making the breakdown of steps so detailed that it becomes unnecessarily long or so broad that it does not include basic steps.

REVIEW THE STEPS

- Review the job steps with the employee to make sure you have not omitted something.
- Include the employee in all phases of the analysis—from reviewing the job steps and procedures to discussing uncontrolled hazards and recommended solutions.

DETECTIVE WORK

A job hazard analysis is an exercise in detective work. Your goal is to discover the following:

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are other contributing factors?
- How likely is it that the hazard will occur?

COMMON HAZARDS IN THE WORKPLACE

Hazard	*Hazard Type*
Chemical	Corrosive, Toxic, Fire, Explosive
Contact	Caught In, Caught Between, Crushed, Impact, Struck Against, Struck By
Electrical	Arc Flash, Fire, Short Circuit, Shock, Static
Environment	Temperature, Visibility, Weather

COMMON HAZARDS IN THE WORKPLACE

Health Hazard	*Hazard Type*
Disease	Blood-borne pathogens, Infectious materials
Ergonomic	Musculoskeletal disorder
Respiratory	Particulates - dust, fumes, mist, aerosol Gas/ Vapors Biologic - bacteria, fungus (mold/spores), virus
Vectors	Arachnids, Insects, Birds, Rodents, Snakes

CONTROLLING THE HAZARDS

The order of precedence and effectiveness of hazard control is the following:

+ Engineering controls
+ Administrative controls
+ Personal protective equipment

ENGINEERING CONTROLS

Engineering controls include the following:

- Elimination/minimization of the hazard.
- Substitution of equipment or process to decrease hazard.
- Isolation of the hazard with interlocks, machine guards, blast shields, or other means.

ADMINISTRATIVE CONTROLS

Administrative controls may include the following:

- Buddy system.
- Written operating procedures, work permits, safe work practices, and training.
- Exposure time limitations (used most commonly to control heat stress and ergonomic hazards).
- Monitoring the use of highly hazardous materials.
- Alarms, signs, and warnings.

PPE

Personal Protective Equipment is acceptable in the following circumstances:

- When engineering controls are not feasible or do not totally eliminate the hazard;
- While engineering controls are being developed;
- When safe work practices do not provide sufficient additional protection; and
- During emergencies when engineering controls may not be feasible.

EXAMPLE JOB HAZARD ANALYSIS FORM

Job Location: Metal Shop

Analyst: Joe Safety Date

- **Task Description:** Worker reaches into metal box to the right of the machine, grasps a 15-pound casting and carries it to grinding wheel. Worker grinds 20 to 30 castings per hour.
- **Hazard Description:** Picking up a casting, the employee could drop (**stuck-by**) it onto his foot. The casting's weight and height could seriously injure the worker's foot or toes.
- **Controls:** Remove castings from the box and place them on a table next to the grinder; Use a device to pick up castings.
- **PPE:** Wear steel-toe shoes; Change protective gloves that allow a better grip.

EXAMINATION OF THE WORKPLACE

THE WORKPLACE

THE ENVIRONMENT

WEATHER

VISIBILITY

ACCIDENTS

CRUSHED

IMPACT

CAUGHT BETWEEN

FALLS

ERGONOMIC

VECTOR

INFECTIOUS MATERIAL

PERIODIC JHA REVIEW

Periodic review of your job hazard analysis ensures that it remains current and continues to help reduce workplace accidents and injuries.

You may identify hazards that were not identified in the initial analysis.

Review your job hazard analysis if an illness or injury occurs. You may need to change the job procedure to prevent similar incidents in the future.

Train all employees affected by the changes in the new job methods, procedures, or protective measures adopted.

JHA –REQUIREMENT?

OSHA's Process Safety Management (PSM) Standard.

The standard mainly applies to manufacturing industries, particularly those pertaining to chemicals, transportation equipment, and fabricated metal products.

Part Number: 1926 • Part Title: Safety and Health Regulations for Construction

Standards for construction strongly infer the concept of JHA.

JHA –REQUIREMENT?

Proposed standard - i2p2

The six major elements of an effective injury and illness prevention program as identified by OSHA are as follows:

1. Management Leadership
2. Worker Participation
3. Hazard Identification and Assessment
4. Hazard Prevention and Control
5. Education and Training
6. Program Evaluation and Improvement

THE END