

IPE 407

Ergonomics and Safety Management

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Creating an effective workplace safety programs

An effective w/p safety program aims to develop long-term plan that must include methods-

- To identify and understand all hazards, real and potential.
- To prevent and control hazards workers are not exposed or the exposure is minimized

Do yourself in the class (10 mins)


- (i) List hazards you have seen in the company you were attached to.
- (ii) How do those hazards harm people or the company?
- (iii) How would you control those if you join the company as a safety engineer?

Core regulatory requirement

Sound safety leadership results in prevention and control of employee injuries, exposures to toxic substances, and other unhealthful conditions

- *Written workplace safety program*

- *An employer must conduct and document a review of the workplace safety program at least annually and document how procedures set forth in the program are met.*



Written workplace safety program *must contain these core elements:*

- a) Management commitment and responsibility*
- b) Employee involvement*
- c) Work-site analysis*
- d) Hazard recognition and resolution*



e) Training and education

f) Recordkeeping

Program review/audit

- Are the set procedures followed?
- Check to see if the organization is making progress towards safety goal.
- Whether the procedures used in the facility or operations are consistent with the written rules.
- Not meeting objectives may also indicate that there are problems (sometimes serious) with the overall safety and health program that need to be addressed.

Establishing goals and objectives

Goal 1

- We will reduce our injury and illness rate by 15 percent by 2018, using 2016 as the baseline.

Objectives

List some objectives using the following keywords:

Safety issues, hazards, investigate, safety inspection, preventive/corrective action, accidents, near-miss, 24 hours, recurrence.

Goal 2

We will establish and maintain a company culture that is committed to workplace safety and health.

Objectives to achieve Goal 2?

Think safety as a value

Working safe is not just a “program,” but a way of doing things. Write a Paragraph.

Safety should be viewed as a value just like honesty, working hard, and showing up to work on time. Values are embedded; priorities can change. Making safety a company value leads to building a workplace safety culture.

Management commitment and responsibility

- As a business owner and manager, you must establish the workplace safety program, both by the priority you give workplace safety and health issues, and by the example you set by initiating safety and health improvements, correcting hazards, enforcing safety rules, rewarding excellent performance in safety and health, and following all safety rules.

A bad scenario

The boss walks through the shop without safety glasses when everyone else has to wear them.

For everyone in the organization

- All employees, including supervisors and managers, follow all safety rules at all times.

For employees

- Promptly report any safety and health hazards they observe to you or their supervisor.
- Perform each job task safely. If employees are unsure how to perform the task safely, they must consult with their supervisor.
- Wear personal protective equipment (PPE) as required for their protection, and maintain the equipment in a sanitary manner.
- Report all incidents, including near misses, to their supervisor immediately upon occurrence.

For supervisors

- Discussing safety issues
- Address all safety concerns raised by staff members
- Incident investigation and report preparation
- Active and positive in all safety related inspections/issues
- Monthly meeting and area inspection

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- Review the workplace safety program at least annually, and make recommendations

For Management

- Communicate the importance of safety
- Review all safety concern
- Review the workplace safety program and communicate the revisions
- Review incident investigation report and takes actions.
- Arrange safety training
- Make improvements in physical plant, machinery, equipment, raw materials, and PPE.

Work-site analysis

A group of processes that helps you understand what's needed to keep workers safe.

Some items to consider

- Arranging on-site consultation program for a comprehensive survey of the hazard.
- Inviting insurance carrier.
- Taking expert opinion
- Ways to identify new hazards
- Job analysis for hidden hazards

Some items to consider (contd.)

- Developing self inspection system.
- How to thoroughly investigate when something goes wrong?
- Identifying patterns by examining previous injury/illness/incident data.

Hazard recognition and resolution

It includes both hazards that currently exist in the workplace and those that may occur due to future changes, such as the introduction of new equipment, processes, or materials or the revision of existing procedures.

Hazard recognition

The best hazard identification methods combine expert opinion about safety and health hazards with input from either a cross-disciplinary team or at least one employee who works directly with the process or equipment in question.

How does Checklist help?

Advantages and disadvantages?

Job hazard analysis (JHA)/ Job safety analysis (JSA)

1. List all job steps or tasks that the worker must perform to complete the job. Create this list by watching the employee who perform the operation in question, recording each step of the process, and reviewing the list with the employee for completeness.

Job hazard analysis (JHA)/ Job safety analysis (JSA)

2. Review each step to determine what safety and health hazards are or could be present; these should be listed as well. Further observation may be necessary to ensure all possible hazards are identified.

Hazard Resolution

- *Engineering controls*
- *Work practices (Modifying task and jobs):* wetting down areas to keep airborne dust levels to a minimum
- *Administrative controls : E.g., Job rotation*
- *Using PPE (Give examples)*

Incident investigation

-Should not be a blame game.

Three caused of incidents.

- (i) Direct causes. E.g. Potential energy, heat energy.
- (ii) Indirect causes (unsafe actions and conditions)
- (iii) Basic causes.
Management/personal/environmental

Investigators need to ask...

- Who was involved in the event?
- Who witnessed the event?
- What happened?
- What was abnormal or different before the incident occurred?
- When did each event in the incident occur?
- Where did the hazard first occur?
- How and why did an event take place?

The investigation process should include:

- Incident site examination
- Witness interviews
- Documentation (including notes, maps, sketches, and photographs)
- Review of operating procedures
- Process information (i.e., flow charts, chemical properties, equipment diagrams, and normal operating limits), maintenance records, and job hazard analyses

The investigation process should include:

- Development of a sequence of events leading up to the incident.

Best practices

What are the best practices to implement an effective workplace safety program?