Accident Causes, Prevention, and Control

Preparation

- 1. Read Company Policy Chapter
- 2. Make _____ Copies of this Lesson Plan for Personnel
- 3. Make Transparency, procure transparency pens, etc.
- 4. Coffee, tea, snacks

Other:

Material

1.

Objective

By the end of this session, personnel shall be able to:

- \cdot Provide the definitions for an accident and a near-miss.
- \cdot List the causes of accidents.
- \cdot Explain how to prevent and control accidents.
- · Complete a Job Safety Analysis.

Background

Many people believe that "accidents happen". They believe that the occurrence of an accident is inevitable and cannot be avoided. Some say "it was just bad luck" or "they were in the wrong place at the wrong time". All of these excuses fail to identify the true causes of accidents. One researcher found that for every serious or disabling injury, there are:

- 10 minor injuries
- 30 property damage incidents
- 600 near-miss accidents

Notes

Lesson

What is an Accident?

An "accident" is an unplanned, undesired event which may or may not result in injury or property damage, that interferes with the completion of an assigned task.

A "near miss" is a form of an accident that does not result in injury or property damage.

While much effort and time is expended on accident investigation, this information tells us that we should be focusing on accident prevention. The majority of accidents are near-miss and may never be reported. The causes of accidents can be broken down into two basic components, unsafe conditions and unsafe acts.

Unsafe conditions are hazardous conditions or circumstances that could lead directly to an accident.

An unsafe act occurs when a worker ignores or is not aware of a standard operating procedure or safe work practice designed to protect the worker and prevent accidents.

A worker needs a electrical switch rewired. A work request is submitted and the work scheduled for the following week. The employee decides, I need this sooner and tries to rewire the switch. The employee receives an electrical shock after failing to lock out the energy source.

This above example illustrates how an employee may cut corners and commit an unsafe act.

Unsafe Acts	Unsafe Conditions
Operating equipment or	Lack of guarding on machinery
machinery without permission	
Defeating safety devices	Defective tools or equipment
Usine defective equipment	Crowding workers into one area
Using the wrong tool for the job	Inadequate alarm systems
Not using personal protective	Fires & explosions
equipment	
Incorrect lifting techniques	Poor housekeeping
Working while intoxicated	Hazardous atmospheres
Horseplay	Excessive noise
	Inadequate lighting

TABLE 1SUMMARY OF UNSAFE ACTS AND CONDITIONS

Notes

All the examples of unsafe acts and conditions given in Table 1 are the result of personal or job factors. Personal and job factors are the root causes of accidents.

Table 2 shows the personal and job factors which can lead to a unsafe act or condition.

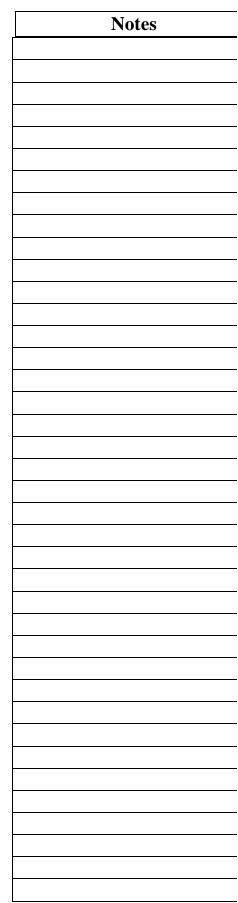
TABLE 2
PERSONAL AND JOB FACTORS

Personal Factors	Job Factors
Lack of knowledge or skills	Non-existent or poorly
due to inadequate training	developed work standards
Improper motivation	Substandard equipment
	design
Physical limitations of the	Poor equipment
worker	maintenance
Distractions which interfer	Purchase of substandard
with the worker's ability to	equipment, tools, and
concentrate on their job	materials
	Unusual increases in
	equipment usage

The personal factors described in Table 2 generally lead to unsafe acts and the job factors are likely to contribute to the unsafe conditions. If you can identify the personal and job factors which may contribute to an accident in your work area, you have taken the first step toward the prevention of accidents.

Accident Prevention

Accident prevention involves the identification and elimination of causes before an accident occurs. Accident reaction is what most supervisors practice, that is, investigating the accident to determine the causes and then implementing corrective actions to avoid reoccurrence. This helps eliminate future accidents from a specific cause, but does nothing to address avoiding the accident that just occurred.



One method of accident prevention that can be used by the supervisor is the **Job Safety Analysis (JSA)**. A JSA takes a specific job (for example, removing a wheel from a vehicle) and identifies the following:

- 1. Sequence of basic job steps.
- 2. Potential hazards at each step.
- 3. Recommended action or procedure to correct the potential hazards.

JSA's are most thorough when conducted by the supervisor and a worker skilled at the job. This also provides the worker with a sense of involvement and control over how their assignments are completed. Prioritize the selection of jobs for JSA. Jobs which have the most accidents, including injuries, property damage, and near misses, should receive the highest priority. Jobs with the potential for severe injury or property damage should be targeted next. Finally, be sure to conduct JSA's on newly created jobs.

Planned Job Observations (PJO) provide the supervisor with an opportunity to validate the JSA. A PJO is a procedure used by supervisors to determine if a worker is completing a job with maximum efficiency and quality. While many supervisors informally observe work on a daily basis, interruptions, distractions, and a lack of planning prevent the supervisor from gathering the information necessary to properly evaluate the worker's performance. The PJO is performed by following these steps:

1. Worker and Job Selection

Workers should be selected for PJO based on the following priority:

- New Workers
- Poor Performers
- Risk Takers
- Good Performers

Selecting jobs for PJO should focus on jobs with an accident history, jobs with the potential for serious injury or significant property damage, and jobs with a high probability of occurrence.

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2. Preparation

The supervisor must make a commitment to be prepared for the PJO. The supervisor should review the JSA and other work procedures for that specific job.

3. Job Observation

When observing the worker, the guidelines listed below should be followed:

- Stay out of the way!
- Do not distract the worker.
- Do not interrupt the worker.
- Do not allow others to interrupt your observation of the worker.
- Have a copy of the JSA with you to follow the job process step by step.

4. Employee Review

Review your observations with the employee as soon as practical after the PJO.

5. Follow-Up

Follow-up includes making changes to procedures or JSA's as appropriate to your observation, retraining on job performance, or additional training not previously provided. Ensure that you follow-up with the worker or the value of the PJO will be lost.

Accident Control

In the event that an accident does occur, Supervisors will be instrumental in the control of the accident. Accident control can be broken down into three phases:

- 1. Accident response
- 2. Accident investigation
- 3. Corrective actions

Accident Response

As a supervisor who witnesses an accident, your first priority is to safeguard workers, visitors, and yourself. Evacuate personnel to a safe area and tend to injured personnel immediately. Initiate the appropriate level of response for the accident. Secure the accident scene as soon as safely possible. This ensures that unauthorized personnel will not wonder into the accident scene and possibly be injured or exposed.

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Control of property damage can be addressed after attending to personnel issues and initiating the emergency response system.

Whenever possible, supervisors should attempt to preserve evidence associated with the accident. This can be critical to determining the cause of an accident. It is best to prevent unauthorized personnel from entering the accident scene and disturbing the evidence. The evidence can be collected once the investigation team has been assembled and the investigation begun.

Accident Investigation

The investigation of an accident involves more than just completing a form. While forms are necessary for the documentation of the accident, supervisors should consider taking photographs or videotape of the accident scene. This level of documentation will be helpful at a later date when discussing the accident and can be used for training purposes.

Supervisors should begin interviewing witnesses as soon as practical after the accident. It is best to interview witnesses alone and while the accident is still fresh in their mind. Here are some suggestions concerning interviewing.

- Create a relaxed atmosphere with the interviewee. Try to put them at ease.
- Interview at the accident scene when possible. This will allow the interviewee to point to various areas or equipment at the accident scene to illustrate what they are trying to communicate.
- Interview each witness separately. This prevents witnesses from being swayed or intimidated by other workers. Each witnesses account of the accident can then be compared objectively to try to develop an accurate description of the accident.
- Getting the witnesses objective account is critical. Avoid biasing the witness by leading them to a conclusion with your questions or by making judgmental remarks.
- Restate the witness' account of the accident back to them when they are finished. This will identify any communication breakdowns during the interview and ensure that the interviewer is gathering an accurate account of the witness' statement.
- End the interview in a positive manner and let the witness know how important their participation in the accident investigation is to the prevention of future accidents.

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 \cdot Let the witness know that it is appropriate to contact you at a later date if they remember any additional information relevant to the accident.

One tool commonly used in accident investigations is to reenact the accident. This can provide insight as to the conditions faced by personnel during the accidents and what options were available for response. The reenactment must be done under strict controls to ensure that no one is injured during the reenactment.

Documentation of the accident, including it's causes and corrective actions is critical. At the Company, supervisors are required to complete a Liability Report Form within two work days following any work-related accident involving an employee or customer. Liability Report Form reports must be completed promptly and with sufficient detail to ensure a complete understanding of what caused the accident and how reoccurrence of the accident can be prevented.

Corrective Actions

Corrective actions are actions taken to prevent the reoccurrence of an accident. Corrective actions can be identified after the root cause(s) of the accident have been identified. Corrective actions should be included on the accident investigation report.

Corrective actions need to:

- \cdot Address the causes of the accident.
- \cdot Prevent those causes from reoccurring.
- \cdot Be achievable with the available resources.
- \cdot Be readily implemented without disrupting production.
- \cdot Be understood by the management and staff.

Once corrective actions have been implemented, the work area supervisor must monitor and evaluate their effectiveness with regard to eliminating the causes of the accident. Failure to evaluate the corrective actions could result in the reoccurrence of the accident.

Closure What questions do you have?

Notes