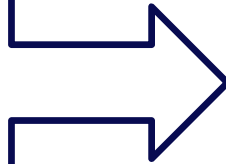




Session 11

ACCIDENT/INCIDENT INVESTIGATION

- q Work methods
- q Worker
- q Work environment
- q Equipment used
- q Organizational structure
- q Climate in existence at the time of accident



● ACCIDENTS \neq FAULT IN AN INDIVIDUAL WORKER

● ● ACCIDENTS $=$ RESULT OF A FAULTY SYSTEM



DEFINITION OF TERMS:

Accidents - are the result of hazardous acts or hazardous conditions – most often, a combination of both.

Investigation – formal and systematic examination of incident/accident

HOW

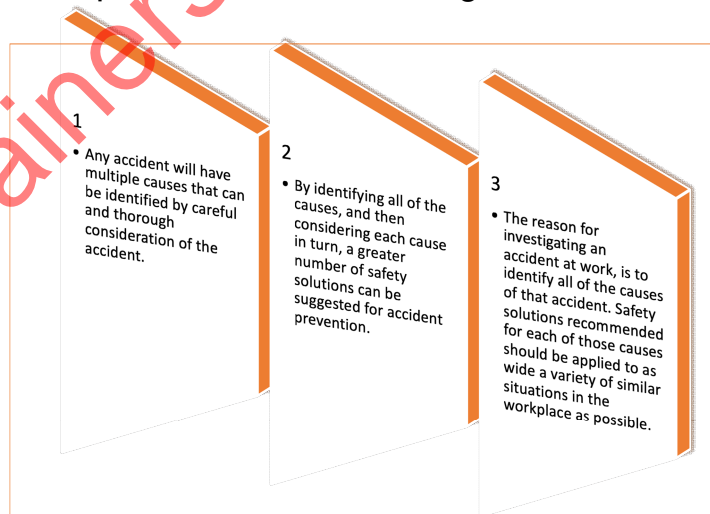
1. Identify all the causes of the accident
2. Provide appropriate recommendations for corrective actions to either eliminate or control those causes.

WHY

- To prevent recurrence
- To comply with policies and regulatory requirements
- To improve a supervisor's management approach
- To maintain employee awareness of the importance of safe, health work habits.



The Principles of Accident Investigation in the Workplace

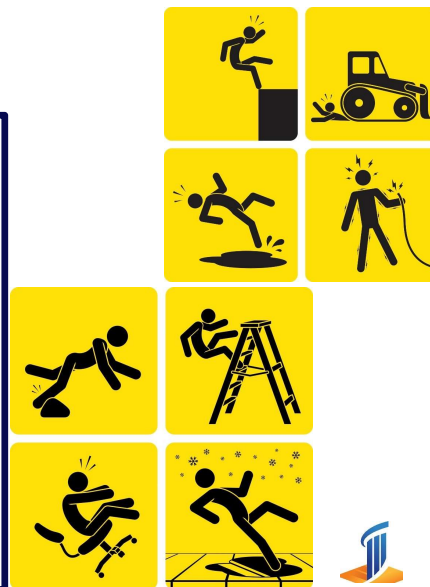


The Principles of Accident Investigation in the Workplace



Types of Accidents

- q Struck against - (running or bumping into)
- q Struck by - (hit by moving object)
- q Fall to lower level
- q Fall on the same level
- q Caught in - (pinch and nip points)
- q Caught on - snagged or hung)
- q Caught between or under - (crushed or amputated)
- q Contact with - (electricity, heat, cold, radiation, caustics, toxics, noise)
- q Overstress, overexertion, overload



Immediate or Direct Causes of Accidents

Unsafe Acts

- q operating equipment without authority
- q failure to warn
- q failure to secure
- q operating at improper speed
- q making safety devices inoperative
- q using defective equipment / tools
- q failing to / improper use PPE
- q improper loading / lifting / placement
- q improper position for task
- q servicing equipment while in operation
- q horseplay
- q under the influence of alcohol / drugs
- q using equipment / tools improperly



Immediate or Direct Causes of Accidents

Unsafe conditions

- q inadequate guards / barriers /warning system
- q inadequate / improper PPE
- q defective tools, equipment or materials
- q congestion or restricted space
- q fire / explosion hazard
- q poor housekeeping / disorder
- q exposure to noise, radiation, temperature extremes, etc.
- q inadequate or excessive illumination
- q inadequate ventilation
- q hazardous environmental conditions



Basic or Underlying Causes of Accidents

Personal Factors →

- q Inadequate physical / physiological capability
- q Inadequate mental / psychological capability
- q Physical or physiological stress
- q Mental or Psychological stress
- q Lack of knowledge
- q Lack of skill
- q Improper motivation



Basic or Underlying Causes of Accidents

Job Factors →

- q Inadequate leadership / supervision
- q Inadequate engineering
- q Inadequate purchasing
- q Inadequate maintenance
- q Inadequate tools and, equipment
- q Inadequate work standards

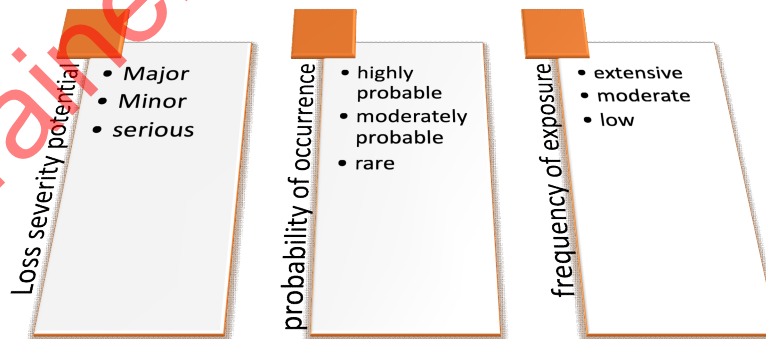


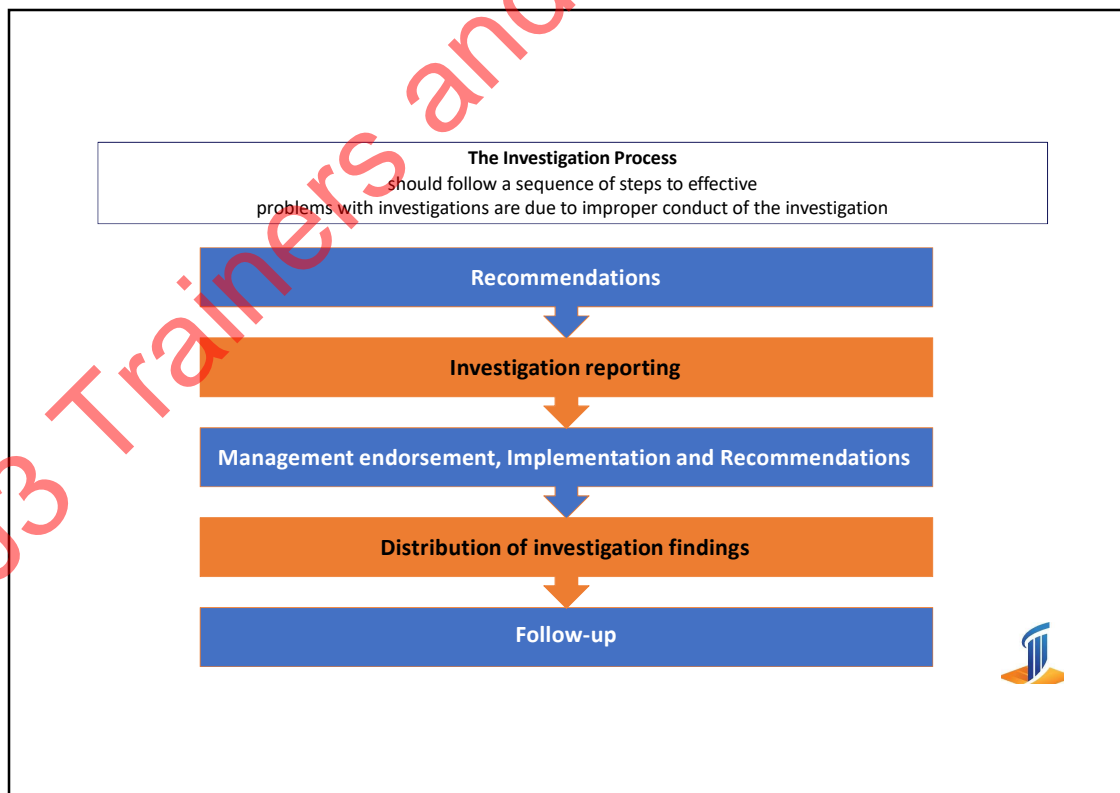
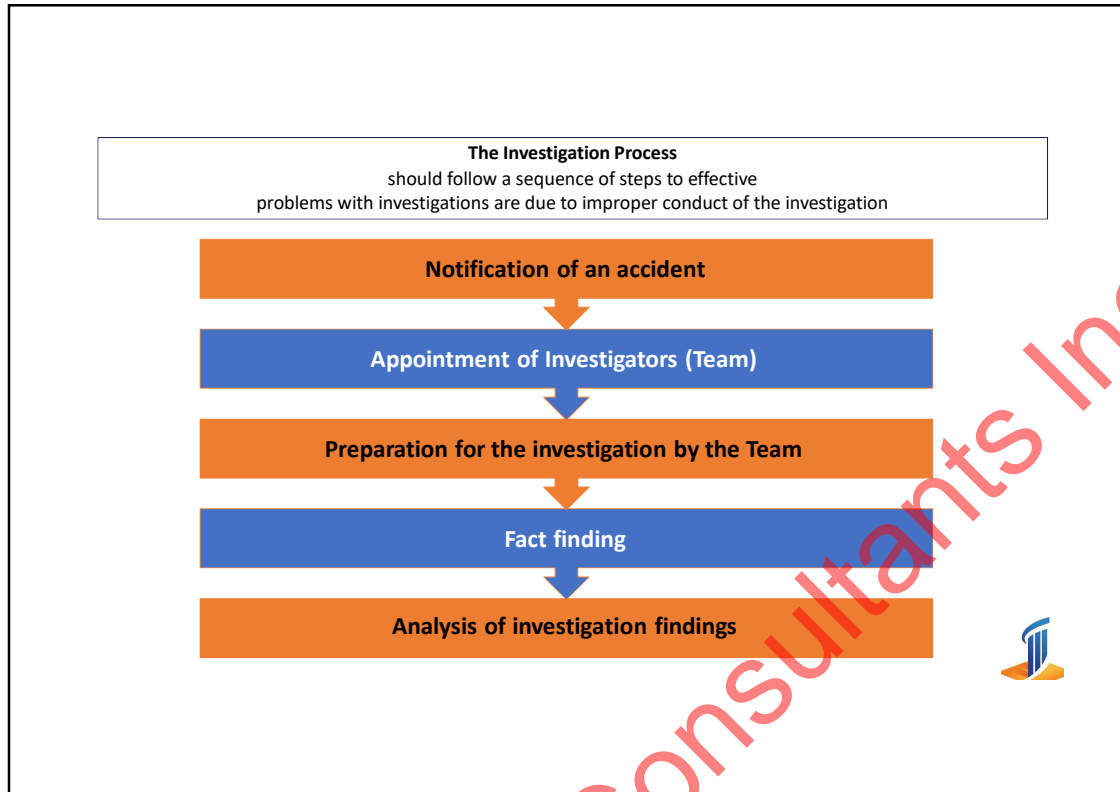
Control Actions Needs

Leadership and administration	Personal communications
PPE	Task observation
Management training	Group meetings
Health control	Emergency preparedness
Planned inspection	General promotions
Task analysis and procedures	Program evaluation system
Engineering controls	Organizational rules
Accident / incident investigation	Hiring and placement
Accident / incident analysis	Off-the-job safety
Employee training	Purchasing Controls (measurement tools)



Evaluation of Loss Potential





Notification of Accident

taken from accident reports submitted by supervisors and line leaders following an occurrence of disabling injuries within their area of responsibility

reports coming from the injured himself or any concerned individual should also be considered, attended, and scheduled for investigation.



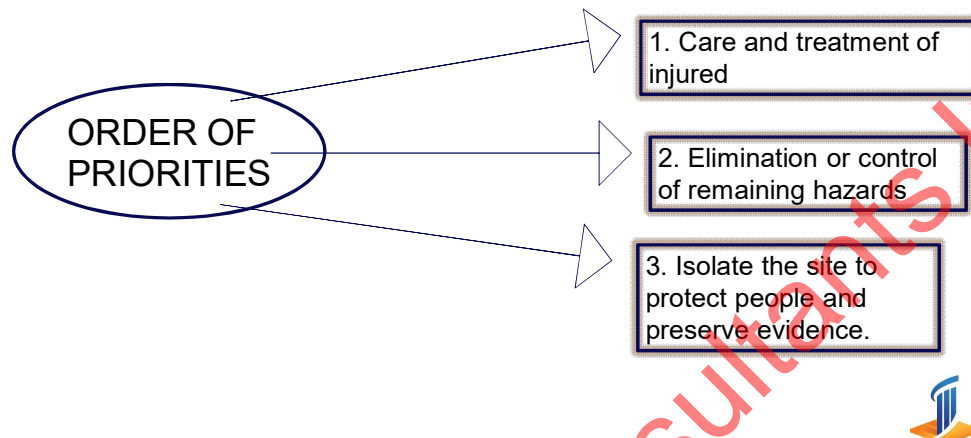
Appointment of Investigators (Team)

Size of an investigation team will depend on factors such as:

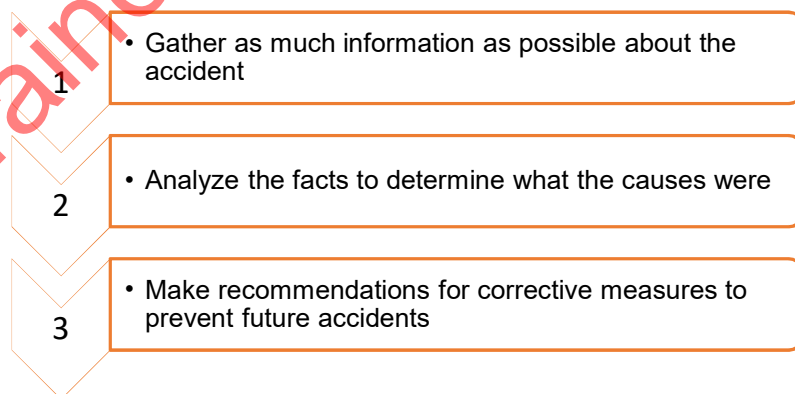
- q The extent of injury
- q The potential for injury or damage
- q The potential of recurrence
- q The department involved
- q Requirements for specialized knowledge
- q Legal requirements



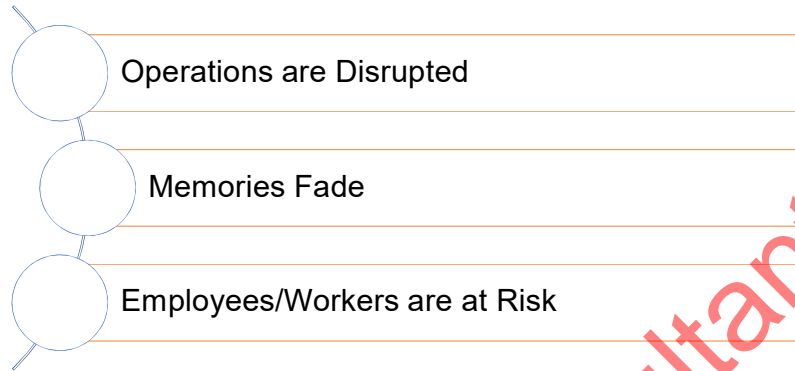
Managing the Accident Scene



General Process of Conducting the Accident Investigation



Accident investigation should begin as soon as possible,
before:



Gathering Information

SOURCE OF INFORMATION

Witnesses - includes victims and others who were involved in the accident and anyone else who actually saw the accident happen.

Physical evidence at the scene - they will often provide information about an accident that witnesses alone cannot.

Existing records - oftentimes offers a wide variety of written records that can be reviewed.



Interview

Ask witnesses to describe, in their own words, what they saw.

Witnesses should:

- q tell what they saw
- q where they saw it
- q when they saw it
- q who was involved

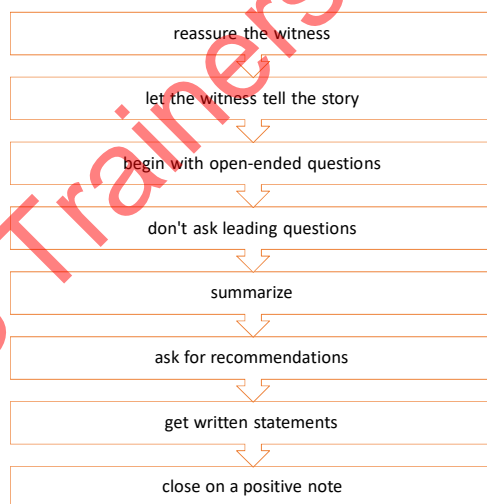


Tips:

- q Let them know from the start that the purpose of the interview is not to find someone to blame.
- q Explain that the notes or records are necessary to help keep the facts straight.
- q Try not to interrupt. Wait until the witness is finished before asking more questions.



Interviewing Procedure



Gather Physical Evidences

Sketches - can provide a valuable reference after conditions have been returned to normal. Reference points show the position of the objects.

Photographs - take photographs when details, color, or shape are important.

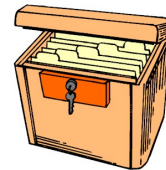
Equipment / materials - if machinery is involved in the accident, it is important to pay particular attention to the positions and readings of any controls, switches, or gauges. This can help determine if the equipment was used correctly, or if it failed operate properly.

Work environment - check lighting and weather conditions, check noise, conditions, check housekeeping conditions.



Four (4) Common Types of Existing Records

- q Employee records - such as employment and health records, licenses, certifications, and training records:
- q Equipment records - including maintenance logs, service reports, operating manuals, and manufacturers' instruction.
- q Job or task records - standard operating procedures and job hazard analyses
- q Previous accident investigations reports - investigations into similar accidents or near-misses may provide clues about causes of the accident under investigation



Analyzing the Facts

After interviewing witnesses and examining the scene, the next step is to determine what specific acts and conditions caused the accident. Depending on the circumstance, some accidents don't have detailed analysis, and some have to undergo structural analysis process.



Change Analysis

A comparison between the way a job was actually performed and the way it should have been performed in order to prevent an accident.

Recommending Corrective Actions

Recommendations must state what specific action will be taken, by whom and when and how the supervisor will assure that it is carried out correctly.



Follow up

Supervisors who conduct accident investigation are responsible to ensure that their recommendations are carried out.

Reporting

It is important for investigators to ensure that all information in their reports is clear and detailed, and reports are neat and legible.



Quick Review on Cause Analysis

Recall Accident Investigation and Reporting in BOSH

ü Event Analysis

ü Cause Analysis

- Direct Cause
- Surface Causes
- Root Causes

Remember these?



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