

## *One Hour Safety Presentation*

The main goal of the Division of Safety & Hygiene is the reduction of accidents and illnesses in the workplace. Toward this goal, the *One Hour Safety Presentation* is designed to support the delivery of a presentation to co-workers in your workplace to help them understand and promote safer and healthier work environments. It is recommended that you take the DSH Training Center course as a background for using *One Hour Safety Presentation* to train others at your workplace. Call 1-800-OHI OBWC, option 2, 2, 3, for class dates and locations.

The *One Hour Safety Presentation* contains:

- **Transparency Masters** from which films can be made to use on an overhead projector,
- **Instructor Notes** which gives the instructor suggestions and script notations to use during the presentation, and
- **Student Handouts** which can be copied for those attending the presentation.

Materials are included for a one-hour presentation on each of these topics:

- ✓ Accident Analysis
- ✓ Bloodborne Pathogens
- ✓ Developing an Ergonomics Process
- ✓ Hazard Communication
- ✓ Lockout/Tagout
- ✓ Respiratory Protection
- ✓ Violence in the Workplace

Applications used:

- 1) Text documents (ending in **.txt**) can be opened with any word processing program.
- 2) Microsoft PowerPoint slides (ending in **.ppt**) can be opened with the Microsoft PowerPoint program. If you do not have PowerPoint and you do have Windows 95, 98, 2000 or Windows NT operating system, you can view the PowerPoint slides by downloading a free PowerPoint Viewer from the following website:  
<http://office.microsoft.com/downloads/default.aspx?Product=PowerPoint&Version=95|97|98|2000|2002&Type=Converter|Viewer>
- 3) Adobe Reader document (ending in **.pdf**) contains the *One Hour Safety Presentation* in read-only format. It can be opened when you download Adobe Reader, which is available free of charge at the following website:  
<http://www.adobe.com/products/acrobat/readstep2.html>

If you have comments or questions about these materials for *One Hour Safety Presentation*, please e-mail us: OCOSHTrng@bwc.state.oh.us

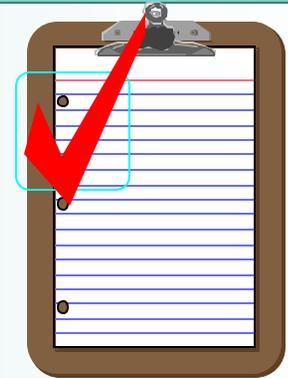
# Transparency Masters

# What is an Accident?



# Objectives

- ◆ Causal factors
- ◆ Steps of accident analysis
- ◆ Written program



# Causal Factors

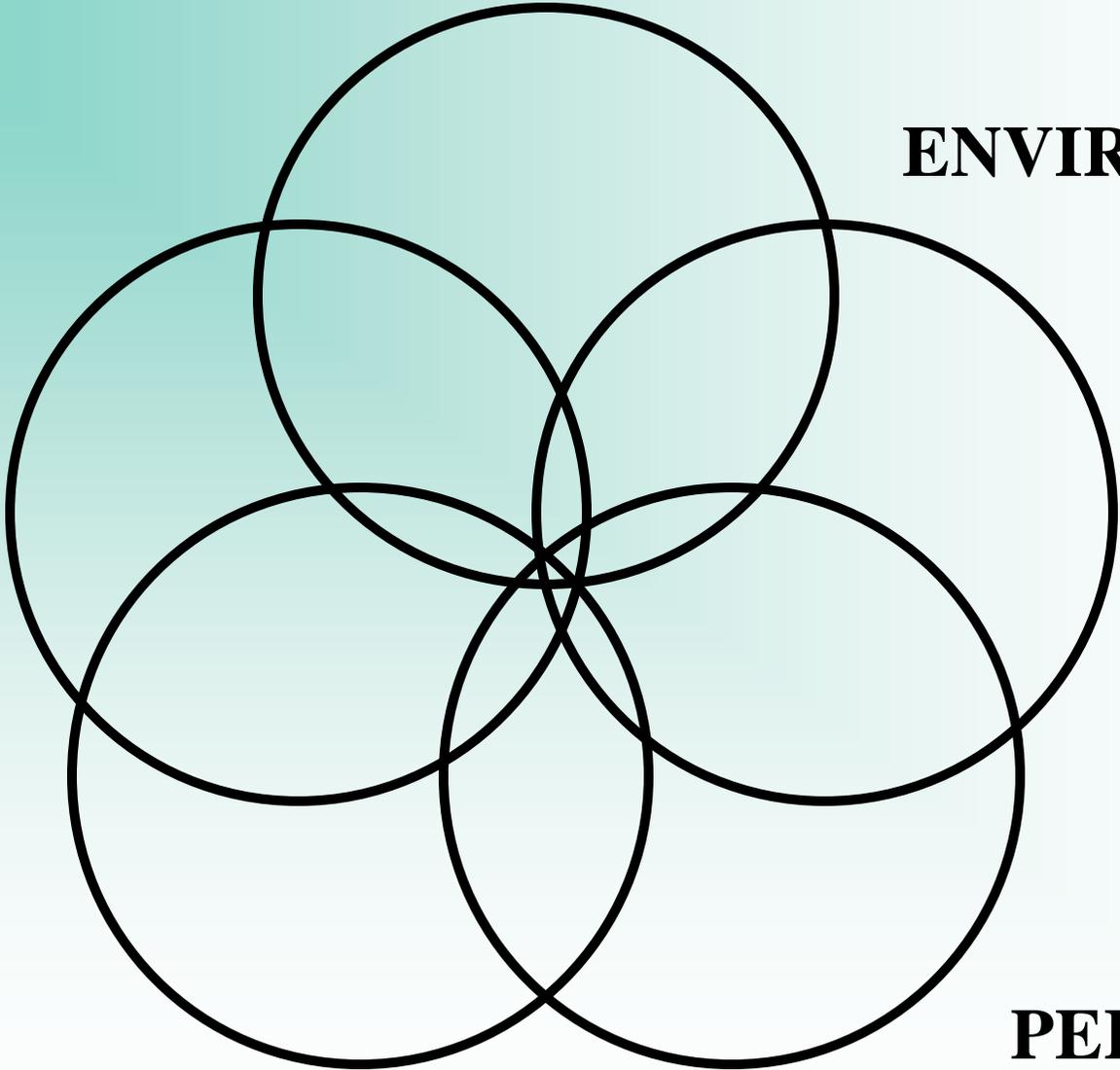
- (1) Task**
- (2) Material**
- (3) Environment**
- (4) Human Factor ( Personal)**
- (5) Management/Process Failure**



**MATERIAL**

**ENVIRONMENT**

**TASK**



**PERSONAL**

**MANAGEMENT**

# (1) Task

- ◆ Ergonomics
- ◆ Safety work procedures
- ◆ Condition changes
- ◆ Process
- ◆ Materials
- ◆ Workers
- ◆ Appropriate tools/materials
- ◆ Safety devices (including lockout)



## (2) Material

- ◆ **Equipment failure**
- ◆ **Machinery design/guarding**
- ◆ **Hazardous substances**
- ◆ **Substandard material**



# (3) Environment

- ◆ Weather conditions
- ◆ Housekeeping
- ◆ Temperature
- ◆ Lighting
- ◆ Air contaminants
- ◆ Personal Protective Equipment



## **(4) Human Factor (Personal)**

- ◆ **Level of experience**
- ◆ **Level of Training**
- ◆ **Physical capability**
- ◆ **Health**
- ◆ **Fatigue**
- ◆ **Stress**



## (5) Management/Process Failure

- ◆ **Visible Active senior management support for safety**
- ◆ **Safety policies**
- ◆ **Enforcement of safety policies**
- ◆ **Adequate supervision**
- ◆ **Knowledge of hazards**
- ◆ **Hazard corrective action**
- ◆ **Preventive maintenance**
- ◆ **Regular audits**



# Steps of Accident

## Analysis

- (1) Protocol/Procedure**
- (2) Information gathering**
- (3) Analysis & Conclusions**

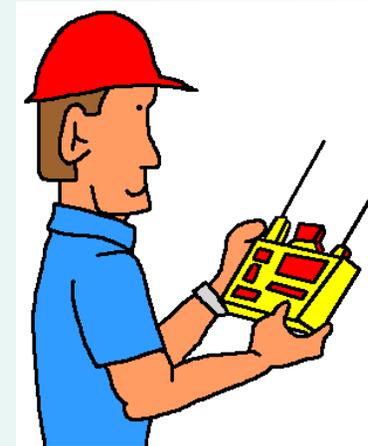


# **(1) Protocol/Procedure**

- ◆ **Our Company's:**
  - ◆ **Emergency Plan**
  - ◆ **First Aid Procedures**
  - ◆ **Accident Plan**
  - ◆ **Accident Report**

## **(2) Information Gathering**

- ◆ **Analysis Kit**
- ◆ **Physical Evidence**
- ◆ **Interview Questions**
- ◆ **Background Information**



# Gather information

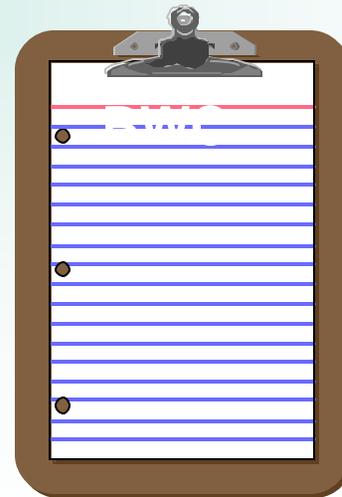
- ◆ Paper documentation
  - ◆ OSHA 300 log
  - ◆ First aid logs
  - ◆ Accident Reports
  - ◆ Process documents
  - ◆ Maintenance
  - ◆ Safety audit documents
  - ◆ Work-force Suggestion
  - ◆ Safety Committee minutes

## **Gather information** (cont...)

- ◆ **Technology tools**
- ◆ **Interviews**
  - ◆ **Employees**
  - ◆ **Supervisors/Managers**
  - ◆ **Vendors**
  - ◆ **Outside consultants**
  - ◆ **Trade associations**
  - ◆ **Other companies in your industry**
- ◆ **Workplace audits**

# (3) Analysis & Conclusions

- ◆ Accident Tree
- ◆ BWC Accident Investigation Form



# Instructor Notes

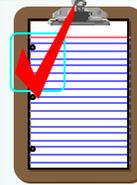
## What is an Accident?



- What is an accident ?
- Any unplanned event that interrupts the completion of an activity and has the potential to include injury, illness, or property damage

## Objectives

- ◆ Causal factors
- ◆ Steps of accident analysis
- ◆ Written program

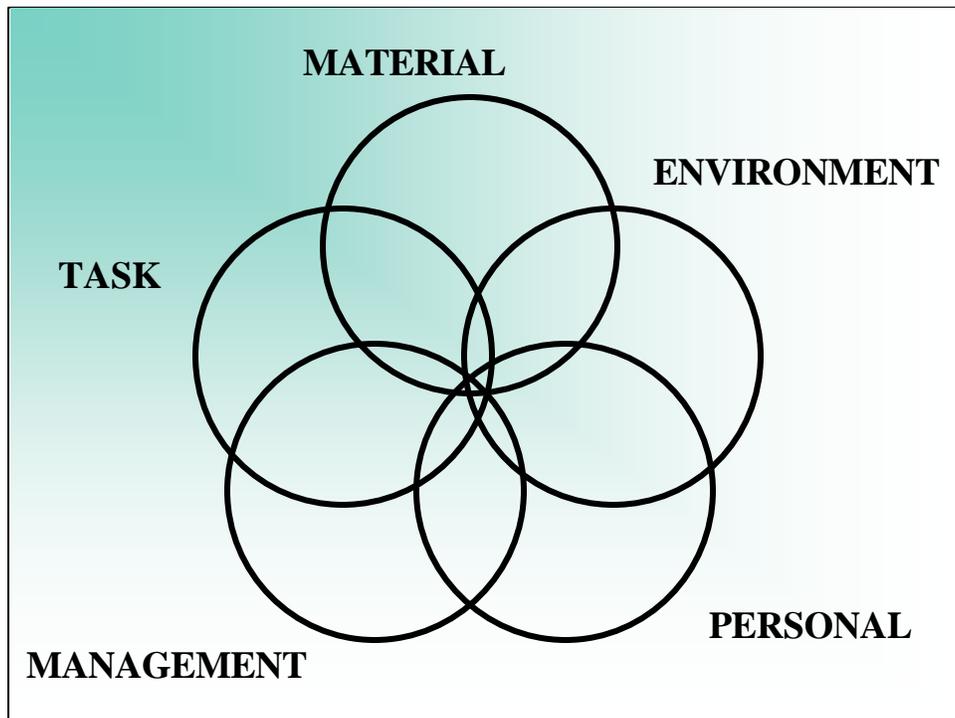


- Learn & apply the 5 casual factors of an Accident (next slide)
- Work through and develop the Steps of Accident Analysis
  - Protocol / Procedure
  - Information Gathering
- Talk about our written program
- Analysis & Conclusions

# Causal Factors

- (1) Task**
- (2) Material**
- (3) Environment**
- (4) Human Factor ( Personal)**
- (5) Management/Process Failure**





- The five intertwining circles of factors show the increase potential for accidents
- More than one factor
- How do these factors interrelate to create accidents?”
- Point: you want to remove as many potential risks as possible.

## (1) Task

- ◆ Ergonomics
- ◆ Safety work procedures
- ◆ Condition changes
- ◆ Process
- ◆ Materials
- ◆ Workers
- ◆ Appropriate tools/materials
- ◆ Safety devices (including lockout)



- Was a safe work procedure used?
- Had conditions changed to make normal procedures unsafe?
- Were appropriate tools & materials available & working properly?
- Were safety devices working properly?

## (2) Material

- ◆ Equipment failure
- ◆ Machinery design/guarding
- ◆ Hazardous substances
- ◆ Substandard material



- Was there equipment failure?
- What caused it to fail?
- Was the machinery poorly designed
- Were hazardous substances involved?
- Were they identified?
- Should Personal Protective Equipment have been used

## (3) Environment

- ◆ Weather conditions
- ◆ Housekeeping
- ◆ Temperature
- ◆ Lighting
- ◆ Air contaminants
- ◆ Personal Protective Equipment



- What were the weather conditions?
- Was poor housekeeping a problem?
- Was noise a problem?
- Was there adequate light?
- Were toxic gases, dusts, fumes present?

## (4) Human Factor (Personal)

- ◆ Level of experience
- ◆ Level of Training
- ◆ Physical capability
- ◆ Health
- ◆ Fatigue
- ◆ Stress



- Were workers experienced in the work being performed?
- Were they properly trained?
- Were they physically capable of doing the work?
- Were they under stress (*work or personal*)?

## (5) Management/Process Failure

- ◆ Visible Active senior management support for safety
- ◆ Safety policies
- ◆ Enforcement of safety policies
- ◆ Adequate supervision
- ◆ Knowledge of hazards
- ◆ Hazard corrective action
- ◆ Preventive maintenance
- ◆ Regular audits



- Does management engage in the same practices they preach?
- Were safety rules in effect and enforced?
- Was adequate supervision available?
- Were regular safety inspections carried out?
- Had hazards previously been identified?
- Was regular maintenance of equipment carried out?

# Steps of Accident

## Analysis

- (1) Protocol/Procedure
- (2) Information gathering
- (3) Analysis & Conclusions



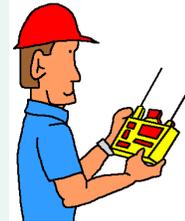
- What is our protocol/ procedure for accidents?
- How do we accomplish the information gathering task?
- What do we do with the information and how do we process it for recommendations?

## **(1) Protocol/Procedure**

- ◆ **Our Company's:**
  - ◆ **Emergency Plan**
  - ◆ **First Aid Procedures**
  - ◆ **Accident Plan**
  - ◆ **Accident Report**

## (2) Information Gathering

- ◆ Analysis Kit
- ◆ Physical Evidence
- ◆ Interview Questions
- ◆ Background Information



## **Gather information**

- ◆ **Paper documentation**
  - ◆ **OSHA 300 log**
  - ◆ **First aid logs**
  - ◆ **Accident Reports**
  - ◆ **Process documents**
  - ◆ **Maintenance**
  - ◆ **Safety audit documents**
  - ◆ **Work-force Suggestion**
  - ◆ **Safety Committee minutes**

## **Gather information** (cont...)

- ◆ **Technology tools**
- ◆ **Interviews**
  - ◆ **Employees**
  - ◆ **Supervisors/Managers**
  - ◆ **Vendors**
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  - ◆ **Other companies in your industry**
- ◆ **Workplace audits**

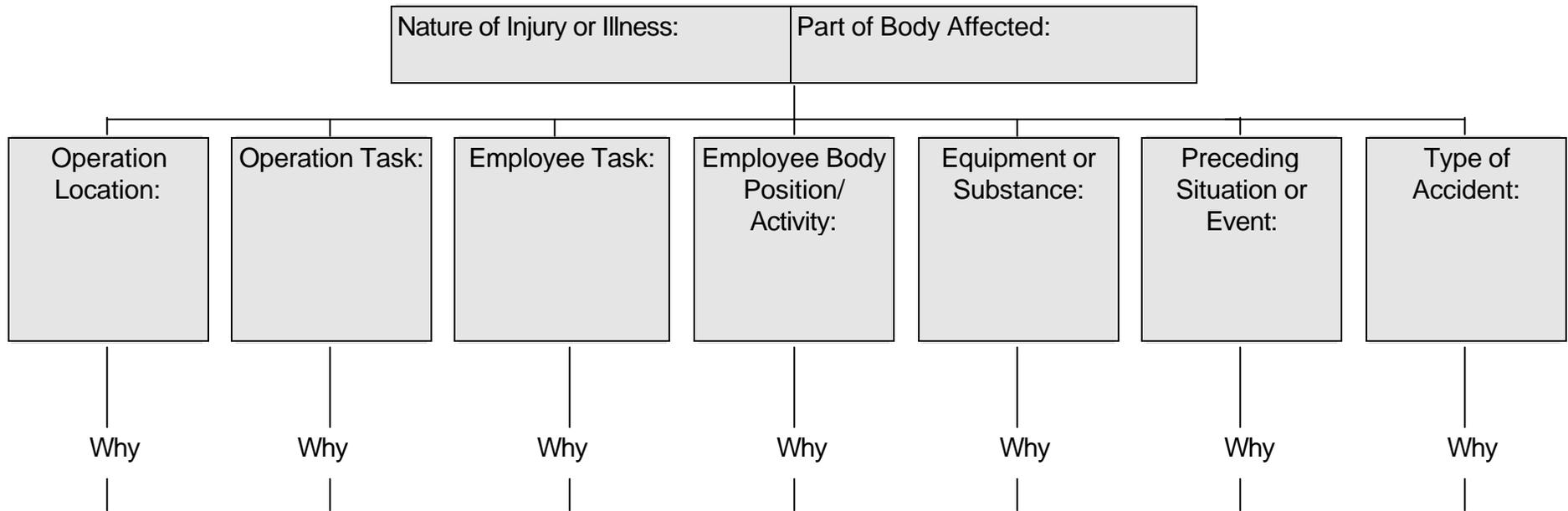
## (3) Analysis & Conclusions

- ◆ Accident Tree
- ◆ BWC Accident Investigation Form



- Practice with the Tree (see following pages)
- Practice with the form (see following pages)
- Why do we do this?
  - Build a record that shows critical behaviors
  - Compare trends
  - Identify needs
  - Develop improvements

## ACCIDENT TREE





## **ACCIDENT ANALYSIS REPORT**

### **PART 1 IDENTIFICATION INFORMATION**

Employee Name \_\_\_\_\_  
 Date of Accident \_\_\_\_\_ Time \_\_\_\_\_ AM PM  
 Occupation \_\_\_\_\_ Shift \_\_\_\_\_  
 Department \_\_\_\_\_ ID \_\_\_\_\_

### **PART 2 SUPPLEMENTARY INFORMATION**

Company \_\_\_\_\_  
 Mailing Address \_\_\_\_\_  
 \_\_\_\_\_  
 City State Zip Code

Telephone ( ) \_\_\_\_\_  
 Establishment Location (if different from above) \_\_\_\_\_

Accident Location  Same as establishment?  On premises? (Check if applies)

Employee Address \_\_\_\_\_  
 \_\_\_\_\_  
 City State Zip Code

Telephone ( ) \_\_\_\_\_ Social Security Number \_\_\_\_\_

Sex \_\_\_\_\_ Age \_\_\_\_\_ Date of Birth \_\_\_\_\_

Was injured person performing regular job at time of accident?  Yes  No

Length of service: With employer \_\_\_\_\_ On this job \_\_\_\_\_

Time shift started \_\_\_\_\_  AM  PM Overtime?  Yes  No

Name and address of Physician \_\_\_\_\_  
 \_\_\_\_\_  
 City State Zip Code

If hospitalized, name and address of hospital \_\_\_\_\_  
 \_\_\_\_\_  
 City State Zip Code

Fatality?  Yes  No If Yes, date of death \_\_\_\_\_

**If death, attach Coroner's Report.**



**PART 4 DESCRIPTION AND ANALYSIS**

Fully describe accident: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Attach photographs of accident scene and machinery/equipment.**

What factors led to the accident (from Accident Tree in Part 3)? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**MACHINERY/EQUIPMENT INVOLVED**

Manufacturer \_\_\_\_\_ Equipment Age \_\_\_\_\_  
Serial No. \_\_\_\_\_ Model \_\_\_\_\_  
Function \_\_\_\_\_  
Location \_\_\_\_\_

- 4. Has machine/equipment been modified?
- 5. Was it guarded properly?
- 6. Was there any mechanical failure?

**To answer these questions, research and attach equipment history, maintenance history, relevant photographs and other reports and comments.**

**CONSTRUCTION**

If construction-related, date of contract \_\_\_\_\_  
Is firm  General Contractor or  Subcontractor  
Names of other contractors \_\_\_\_\_

**WEATHER/ENVIRONMENTAL CONDITIONS** (temperature, housekeeping, lighting, work surfaces, etc.)

\_\_\_\_\_  
\_\_\_\_\_

## **ACCIDENT ANALYSIS TERMINOLOGY**

**ACCIDENT** - An unplanned event that interrupts the completion of an activity, and that may (or may not) include injury, illness, or property damage. (also - incident, near miss)

**ACCIDENT ANALYSIS** - The collection of all pertinent information through interviews, past records, on-site inspection, etc. that helps identify all causes of an accident. Part of accident analysis is the determination and implementation of appropriate corrective action.

**ACCIDENT ANALYST** - Someone who is held responsible for conducting analyses . One who has been trained in the purpose and effective methods of accident analysis.

**ACCIDENT RECORDKEEPING** - The documentation of recordable accidents as required under federal law. (a.k.a. OSHA recordkeeping)

**AGENCY** - The object or substance which was directly involved in the accident.

**CATASTROPHE** - Accidents resulting in one or more fatalities, or the hospitalization of three or more employees.

**CHARGE BACK SYSTEM** - A department or location is charged a specified amount of the insurance premium based on its percentage of the total incident or accident cost.

**CLAIMS MANAGEMENT** - The process of maintaining an active role to insure speedy recovery and return to work.

**COMPENSATION PAID** - The payment of lost wages and benefits, excluding medical, paid to the claimant or claimant's dependent.

**DIRECT COST** - Wage compensation, benefits, and medical costs paid as the result of an accident.

**EMPLOYEE BODY POSITION / ACTIVITY** - The body position required by an activity that relates to an accident, injury, or illness.

**EMPLOYEE TASK** - The specific task performed by the employee.

**ERGONOMICS** - The science that seeks to adapt work or working conditions to the worker.

**EXPENSE** - The cost of an accident incurred as a result of damage, repair, outsourcing contracting, production loss.

**FACTOR(S)** - Any behavior, condition, act, or negligence without which the accident would not have happened, can be simultaneous or sequential.

**FIRST AID** - The administering of minor medical attention, usually not covered by insurance.

**INCIDENT** - An unplanned event that interrupts the completion of an activity without directly involving the worker(s). Something that happens as a result of and in connection with something more important.

**INDIRECT COST** - Costs, other than direct costs, related to an accident, usually not covered by insurance.

**MEDICAL EXPENSES** - The payment of medical costs related to an accident.

**NATURE OF INJURY / ILLNESS** - The result of an occupational accident / illness to the physical condition or health of the worker. (examples: amputation; fracture; strain; sprain; carpal tunnel syndrome)

**NEAR-MISS** - An unplanned event that interrupts the completion of an activity which directly involves the worker(s).

**OCCUPATIONAL ILLNESS** - Any abnormal condition or disorder caused by exposure to environmental factors associated with employment, whether due to acute (short) or chronic (long) exposures.

**OCCUPATIONAL INJURY** - An injury which results from an exposure involving an incident in the work environment.

**OPERATION LOCATION** - Where the work is being performed.

**OPERATION TASK** - The specific operation being performed.

**OUTSOURCING CONTRACTING** - Outsourcing work requiring specialized skills such as repairing underground utilities or electrical work.

**PART OF BODY AFFECTED** - Exact area of the body damaged as the result of an occupational injury / illness. (examples: right eye, left leg, multiple body parts)

**PRE-ACCIDENT PLAN** - An existing plan of action set up to respond in the event of an accident. Elements of such a program include:

- an alarm system to warn other employees;

- procedures to save lives directly involved with the accident scene (i.e. first aid, transfer to medical facility);
- procedures for protecting lives or property from further loss;
- procedures to assure timely analyses ; and
- (suggested) procedures to provide assistance to employees suffering reaction to an accident - employee assistance program

**PRECEDING SITUATION OR EVENT** - Important event(s) occurring just prior to an accident injury, or illness. These may be considered as triggering events, situations, or circumstances necessary for the accident to occur.

**PRODUCTION LOSS** - Examples are damaged machinery, equipment, tools out of service, damaged product, disrupted project schedule.

**RECONSTRUCT** - To recreate, using available evidence, events and conditions leading to and including the accident. This will help identify the cause or causes of the accident. Special precautions should be taken to prevent the accident from being repeated.

**RESERVES** - The total amount of money set aside to pay future medical and /or compensation awards over the life of the claim.

**SUPERVISION** - The management of a company, or a designated representative.

**TEMPORARY WORKER REPLACEMENT** - Replacing the injured worker with a temporary worker, or breaking in a new worker.

**TIME LOSS MEASUREMENT** - The time away from the job, computed in days, hours, and minutes. Minutes are recorded in 15-minute increments, such as 15 minutes, 30 minutes, 45 minutes, and 60 minutes, which would roll over to the hour.

**TYPE OF ACCIDENT** - The general type of accident that occurred. (examples: fall to the same or different level; caught in, on, or between; struck by; strike against)

**WAGE** - Payment for services to a worker. Examples could be hourly, daily, weekly, monthly, or by the piece.

**WITNESS** - A person who can contribute information about an accident. Someone involved in the chain of events leading to an accident, someone involved in the post-accident scene, or others who perform the same job, as examples.

# Student Handouts

## What is an Accident?



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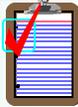
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## Objectives

- ◆ Causal factors
- ◆ Steps of accident analysis
- ◆ Written program



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## Causal Factors

- (1) Task
- (2) Material
- (3) Environment
- (4) Human Factor ( Personal)
- (5) Management/Process Failure



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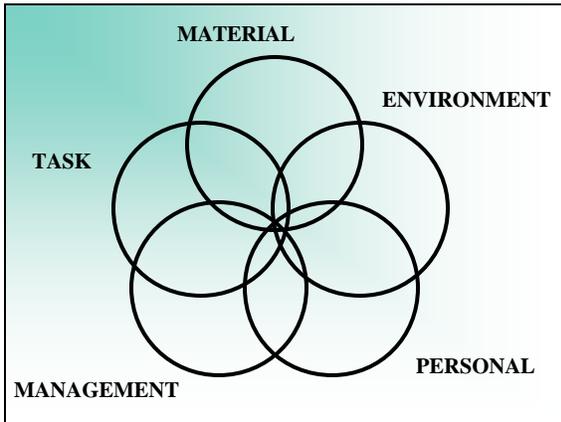
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### (1) Task

- ◆ Ergonomics
- ◆ Safety work procedures
- ◆ Condition changes
- ◆ Process
- ◆ Materials
- ◆ Workers
- ◆ Appropriate tools/materials
- ◆ Safety devices (including lockout)

An illustration of a worker in a blue shirt and cap reading a book titled 'SAFETY RULES'.

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### (2) Material

- ◆ Equipment failure
- ◆ Machinery design/guarding
- ◆ Hazardous substances
- ◆ Substandard material

An illustration of a worker in a blue shirt and cap being struck by a falling object from a machine, with a large yellow starburst indicating the impact.

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### (3) Environment

- ◆ Weather conditions
- ◆ Housekeeping
- ◆ Temperature
- ◆ Lighting
- ◆ Air contaminants
- ◆ Personal Protective Equipment



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### (4) Human Factor (Personal)

- ◆ Level of experience
- ◆ Level of Training
- ◆ Physical capability
- ◆ Health
- ◆ Fatigue
- ◆ Stress



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### (5) Management/Process Failure

- ◆ Visible Active senior management support for safety
- ◆ Safety policies
- ◆ Enforcement of safety policies
- ◆ Adequate supervision
- ◆ Knowledge of hazards
- ◆ Hazard corrective action
- ◆ Preventive maintenance
- ◆ Regular audits



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## Steps of Accident Analysis

- (1) Protocol/Procedure
- (2) Information gathering
- (3) Analysis & Conclusions



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### (1) Protocol/Procedure

- ◆ Our Company's:
  - ◆ Emergency Plan
  - ◆ First Aid Procedures
  - ◆ Accident Plan
  - ◆ Accident Report

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### (2) Information Gathering

- ◆ Analysis Kit
- ◆ Physical Evidence
- ◆ Interview Questions
- ◆ Background Information



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**Gather information**

- ◆ Paper documentation
  - ◆ OSHA 300 log
  - ◆ First aid logs
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  - ◆ Safety audit documents
  - ◆ Work-force Suggestion
  - ◆ Safety Committee minutes

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**Gather information (cont...)**

- ◆ Technology tools
- ◆ Interviews
  - ◆ Employees
  - ◆ Supervisors/Managers
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- ◆ Workplace audits

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**(3) Analysis & Conclusions**

- ◆ Accident Tree
- ◆ BWC Accident Investigation Form



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