



Accident Investigation Resource

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Introduction

- Reason
 - Since October 2008, Loss Control has submitted recommendations to 25 CBIA Members
 - 44% of the time, accident investigation improvements were formally recommended
 - This is more common than any other recommendation type
 - In most remaining situations, standard procedures were in place and informal recommendations for more details were submitted.

Introduction

- Audience
 - Supervisors (priority)
 - Dedicated safety personnel
 - Safety committee
 - Management
 - Possibly general employees (to show that there will be a formal process going forward)

Introduction

- Purpose
 - Provide a resource for those individuals responsible for conducting investigations
 - Create a general structure
 - Improve accident documentation
 - Make every attempt to improve operations based on accident investigations findings

Why formal accident investigations are important?

- Documentation
 - There is no way to tell what the future holds
 - Have to learn from the past to focus on the future
 - Without documented details, there is no way to learn



Why formal accident investigations are important?



- Corrective Actions
 - Identify what went wrong to cause the accident
 - Make operational improvements
 - Prevent future injuries
 - Identify additional uncontrolled exposures

Who should be responsible



- Proper investigations can be a multi stage process
- It depends on nature and size of company
- And the overall commitment to safety

Ideal situation

- Supervisor
 - Should be responsible for conducting initial investigation
 - Provide initial input on corrective actions
- Safety Personnel
 - Would conduct any follow up investigations and implement immediate corrective actions to resolve major issues
- Safety Committee
 - Brainstorm possible solutions or corrective actions using information from investigation
 - Creating time table to implement corrective actions
 - Following up on corrective actions to ensure they are adequate

Typical situation

- If there is no dedicated safety personnel, committee...etc
 - Still follow same process, but designate responsibilities, more minds = more ideas = more solutions
 - Always investigate, review, brainstorm, implement corrective actions, and follow up



Typical current process

- First Report of Injury (FRI)
 - Since FRI needs to be completed to process claim, it is being used as primary investigation form
 - Majority of information is claims related, home address, phone, social security number, insurance carrier, company name...etc
 - At the very bottom of the FRI, there is a small box that asks “How Injury Occurred”

Typical information documented

- Why Injury Occurred
 - Employee slipped and fell
 - Employee hurt back while lifting
 - Employee cut left index finger
 - Sprained shoulder

What can we do with this information???



First Report of Injury

- What's the value
 - Still has to be completed to process the workers' compensation claim
 - There is some valuable information such as date and time of incident, years experience, job description...etc

But at no time should it be considered a stand alone investigation

So what should be used



- There is no mandatory investigation form
- They could come from;
 - Internal form
 - Safety consultant
 - Insurance carrier
 - OSHA
 - Internet
 - Etc...

It doesn't matter what is used, as long as the information is there

- A blank piece of paper attached to the FRI could be used as long as these two important questions are addressed;
 - What was the direct cause or contributing factor that caused the accident (what went wrong???)
 - What can be done to prevent similar injuries

Possible form



- A detailed investigation form has been established by FutureComp for all CBIA Members
- The form will be sent to all Members via physical mail as part of this training program
- It can also be found on the CBIA website
- Again, it is not a requirement for this form to be used

Definition of an accident

- OSHA defines an accident as;
 - Undesired event that results in physical harm to a person or damage to property
 - Unwanted interruption of a desired course of action
 - An unplanned, unforeseen, unwanted occurrence that interrupts or interferes with the orderly progress of an activity (your business)

Accidents affect all aspects of business

- Indirect and direct effects
 - Cost of injury
 - Time out of work
 - Damaged machinery
 - Time to investigate
 - Time to retrain
 - Loss of production
 - OSHA fines
 - Etc...



Standard format of an effective investigation

- Typical elements
 - What happened
 - Why did the accident occur
 - What can be done to prevent a similar accident
 - How will this improve operations
 - Status of corrective actions

What happened



- Details absolutely vital
- Should be completed by supervisor or designated individual
- Time is of the essence as details are fresh in employee/witness minds
- Ask drill down questions
- Document everything

The six W's



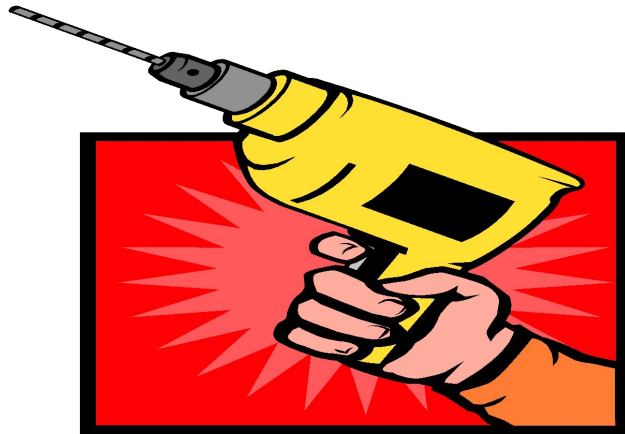
- Will be used throughout the investigation process
 - Who, when, where, what, how, and eventually why

What happened using the six W's

- When documenting what happened ask the following questions;
 - Who was involved
 - When did the incident occur
 - Where did the incident occur
 - What task or job was the employee doing
 - How was the task or job being performed
 - Why did the employee feel incident occur

But remember...

- These are just starter questions
 - If the information is not clear or there could be additional information, then continue to drill down
 - For instance, if an employee states that he/she slipped and fell, ask what did they slip and fall on, why did they slip/fall...etc

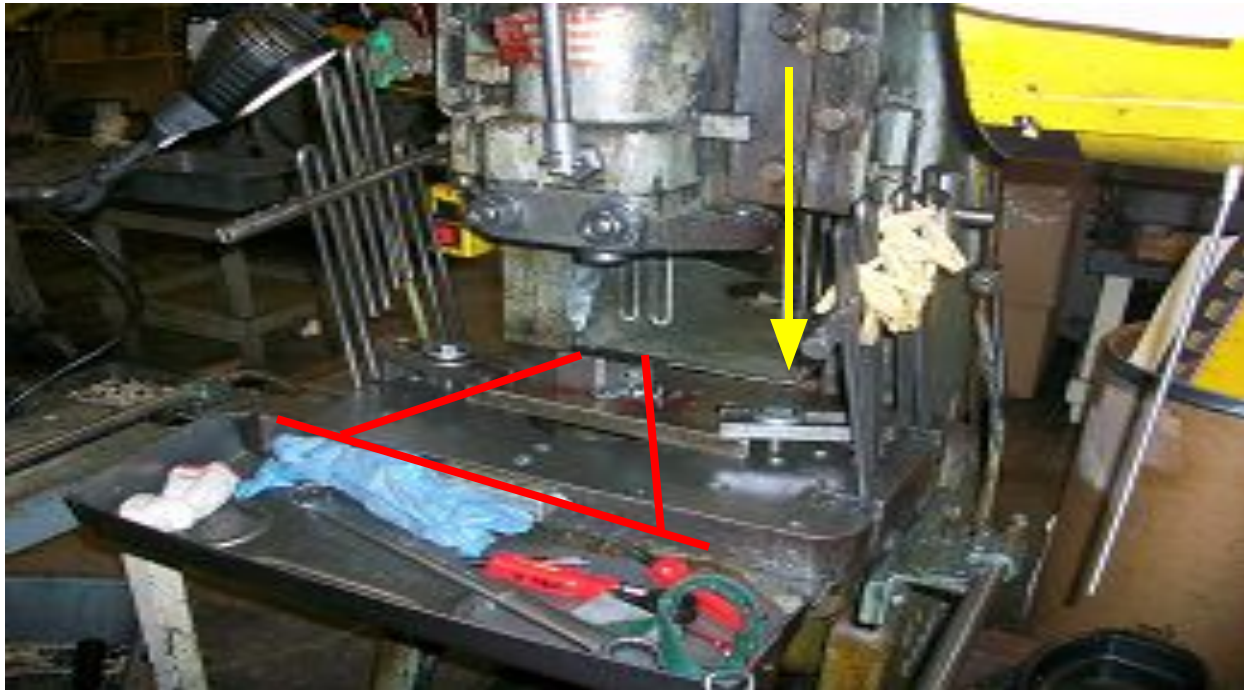


Example What Happened

- **Who:** Experienced machine operator working in Department 12, 1st shift
- **When:** Accident happened August 1, 2009 at beginning of her shift
- **Where:** Working in regular department (dept.21), which is the press department
- **What:** Assembling wire combos using press
- **How:** Attach smaller, circular component to long, narrow component using press. Was holding piece too close to point of operation causing crushing injury

Ultimately these questions will lead to **Why**

Example What Happened



- Yellow line indicates downward motion of press
- Red line represents employee reaching into point of operation

Why did the accident occur

- Have employee explain their take on why it happened
- Utilize details from “What Happened” to identify possible causes
- Supervisor will provide initial thoughts
- Cause should be reviewed by additional parties



Again, the six W's



- Is not the exact same process, but similar considerations can be used to determine what caused the incident

Why did the accident occur using the six W's

- Was the person (who) the cause of the accident
- Was the time (when) responsible
- Was the location or department (where) a contributing factor
- Did the process or material (what) assist in causing accident
- Was the way the task was being performed (how) a factor

Why did the accident occur



- By asking questions and drilling down, we should identify true cause
- Do not rely only on employee version of why
- Get multiple people involved, more minds = more solutions
- Remember, multiple things could have gone wrong

Why did the accident occur



- Employee Error
 - Easy to say it was employees fault or lack of common sense
 - Should be last resort
 - Remember, it is companies duty to take employee error out of the equation.

Example why did the accident occur

- **Using Previous example**

- **Who:** Experienced machine operator, not considered an immediate factor.
- **When:** Beginning of her shift, could be a cause
- **Where:** Regular duties, not a factor, may want to check frequency of injuries in press department to identify trends
- **What:** Standard product assembly, components are required, not a factor
- **How:** Two products need to be attached using mechanical pressure. Employee was holding products to close to press and was able to gain access to point of operation

Possible causes

- **From Previous Example:**
 - May want to review for trends associated with time of accident. Are injuries occurring frequently at beginning of shifts
 - Is it common for accidents to happen in press department, we may have to look at entire press operation/process
 - Ultimately, employee should not have been able to gain access to point of operation

Employee Error

- Remember...
 - It would be very easy to say in this situation that experienced machine operator should have known not to put her hands in the point of operation
 - However...she did and the accident could have been severe
- What can be done to take employee error factor out of the equation

What can be done to prevent a similar accident

- Need to learn from the event to prevent future similar situations
- Should focus on taking employee error out of the equation
- Should address all contributing factors
- Training should be considered last resort



Direct cause

- From Previous Example:
 - Primary direct cause or contributing factor
 - Machine guarding that is available was not set up correctly to prevent employee from gaining access to point of operation



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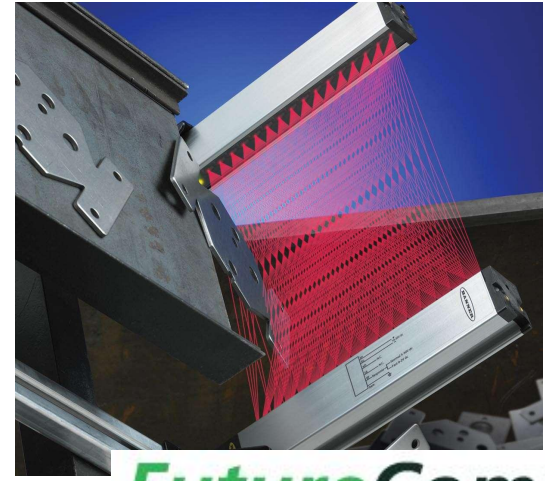
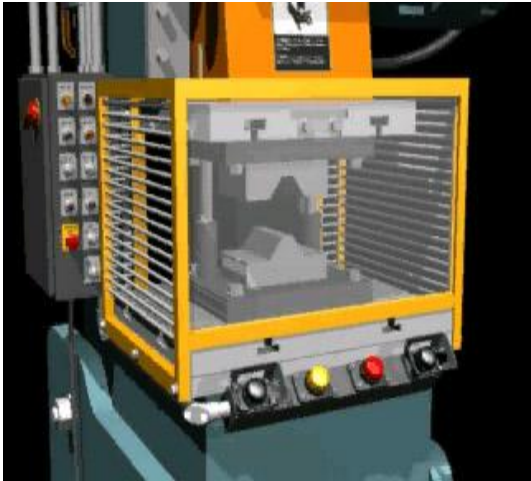
What could be done



- Assign maintenance department the responsibility of adjusting guards to each specific operation
- Educate all employees in press area of the point of operation hazard
- Investigate alternative guards that will allow for production, but prevent access to point of operation (preferred).

Corrective Action

- Any action is better than no action
- However, the only way to ensure a similar accident could not happen again is by installing appropriate guarding



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Fabricated guards



- Improving safety is absolutely vital, however it is also understood that a job needs to be completed and production needs to continue. Sometimes the best control is a fabricated one

Caution

- Develop a schedule to implement controls
 - Create a step by step process
 - Some controls can require significant investment
 - Ensure control is effective and not introducing new hazards before implementing company/department wide
 - Do not invest in a control and have it be ineffective

For instance

- Fabricated guards will be placed on the three most productive presses
- Effectiveness will be evaluated for one week
 - Process will be observed by supervisors
 - Discussions about effectiveness should occur with machine operators
- Attempt to streamline work on unprotected presses, but ensure current guarding is set up correctly prior to use
- If new guards are deemed effective, schedule for full implementation
- If ineffective, re-evaluate until proper solution is identified

How will this improve operations



- Should provide evidence of how corrective actions will prevent similar situations
- Could be multiple step process
- Helps provide reasoning for control investment

How will this improve operations

- From Previous Example
 - By implementing fabricated machine guards the following operational improvements will be made;
 - Employee will no longer be able to access point of operation
 - By modifying guard specific to needs, including a sliding door to accommodate varying parts, production will not be effected
 - The employee error factor is now out of the equation

How will this improve operations

- Always try to implement the most effective control
- Training should always be considered last resort or supplemental
- When training is necessary, do not focus on individual, but entire department or all employees



Status of corrective actions

- Controls require time and investment
- Creates a timeframe for when controls will be implemented
- Should include specific dates
- May be a multiple step process



Status of corrective actions

- Remember
 - When there is a possible large investment, implement in steps
 - Include the multiple steps in status report
 - Revisit the status to confirm effectiveness



Other considerations



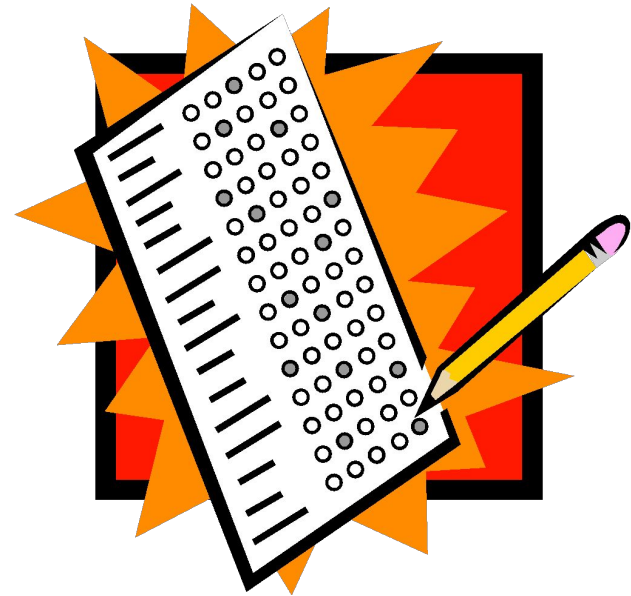
- Witnesses
 - When possible attach witness statements to accident reports
- Take Pictures
 - So valuable, either directly after the incident or just the process
 - Will allow those not familiar with operations to provide input
- Get signatures

Conclusions

- Accident investigations...
 - Are the most common area identified as in need of improvement within the CBIA Workers' Comp Program
 - Should be a formal process
 - Help prevent future similar incidents
 - May identify other uncontrolled hazards
 - Provide detailed information that can help identify trends and operational exposures

Knowledge Assessment

- Two Part Assessment
 - Conduct your own investigation to test what you have learned
 - Complete an assessment to reiterate accident investigation knowledge



Your investigation tools



- Management has been provided a blank accident investigation form as part of the this training program. This form can be used to help walk through the process
- The blank form can also be found on the CBIA website
- Or use your own form

Your example – What happened

- On January 27, 2009, the injured employee was working in the warehouse located in the northwest corner of the facility. While carrying two cases of screws (estimated 25 pounds each) the employee slipped and fell causing significant strain to his back.

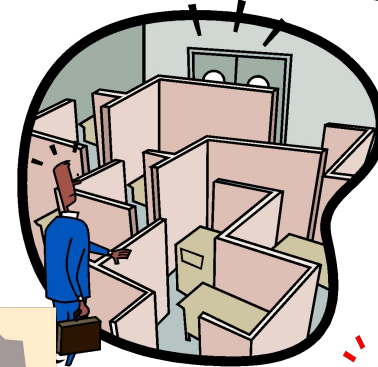
The employee has been employed by the ABC Company for seven years and has been working in the warehouse the entire time. Incident occurred during the first shift at 9:30 am.

After further investigation, it was determined that there was no poor floor conditions, no spills, and no weather conditions.

The employee did state that he tripped over an empty pallet that was located in the aisle way

Your example – Why did the accident occur

- Based on information provided as to what happened, what could be some contributing factors;



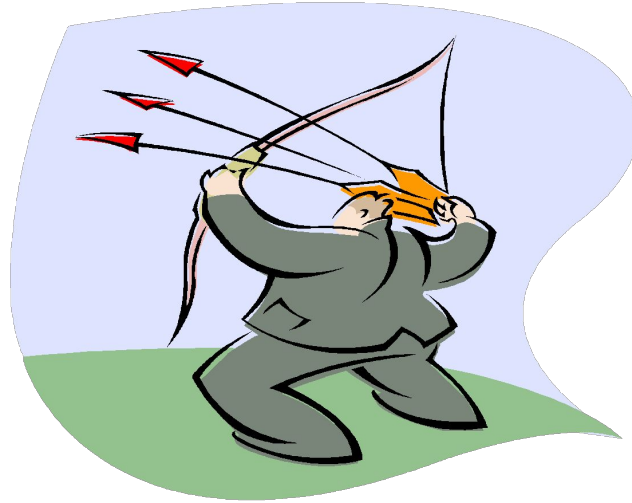
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Your example – What can be done to prevent a similar accident



- What operational improvements can be made to help prevent a similar situation from happening again

Your example – How will this improve operations



- How will the actions you recommended improve operations and prevent similar situations

Your example – Status of corrective actions

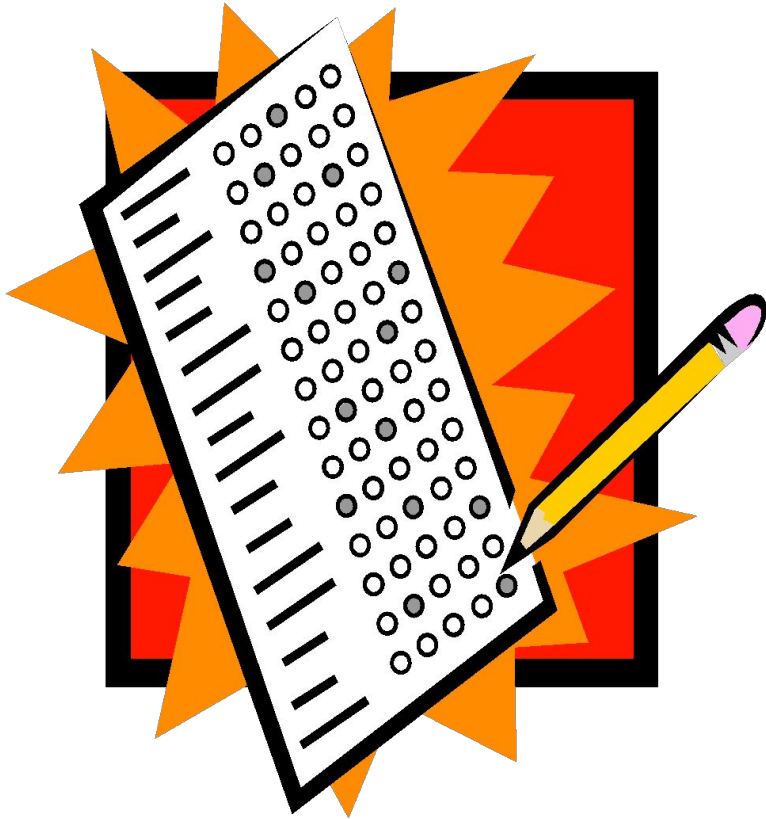


- Will be different for each organization and each action
- Remember there should be specific goals or dates
- Always revisit corrective actions to ensure effectiveness

Compare your results

- The purpose of this exercise was to start the brainstorming process and confirm that during your next investigation, the correct questions will be asked and answered
- Compare your solutions to the possible solutions provided to management as part of this resource
- Remember, there can be varying solutions identified as part of the investigation process, as long as direct causes were identified and appropriate controls implemented to improve operations...an adequate investigation was completed

Complete Assessment



- Part two of two
 - Complete the assessment to reiterate accident investigation knowledge
 - Management has received a copy as part of resource packet

References

- Training resource created by;
 - Rob Bolduc
Loss Control Consultant
CBIA/FutureComp

References

- A special thank you to the following CBIA Members for allowing pictures;
 - HMP Industries
- Pictures from;
 - www.osha.gov
 - www.thefabricator.com