



FPST 3013 Safety Management

Lecture 5

The Incident Investigation Process



"Those who cannot remember the past are condemned to repeat it."
The Life of Reason, George Santanaya, 1906

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Incident Investigation Information



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Accident vs. Incident

"Accident" - a random event that "oh, well, it just happened"
and could not have been prevented.

most harmful workplace incidents are wholly preventable.

"Incidents" do not have to occur; they can be prevented

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Language of Incident Investigation

Incident A work-related event in which an injury or ill-health (regardless of severity) or fatality occurred, or could have occurred.

Near Miss An incident that could have caused serious injury or illness but did not; also called a "near miss."

Root Causes The underlying reasons why unsafe conditions exist or if a procedure or safety rule was not followed in a workplace. Root causes generally reflect management, design, planning, organizational or operational failings (e.g., a damaged guard had not been repaired; failure to use the guard was routinely overlooked by supervisors to ensure the speed of production).

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Incident with Loss vs. Near Miss



Loss

A forklift falls off a loading dock causing injury to the driver and damage to the vehicle.



Near Miss

A forklift driver narrowly avoids collision with a pedestrian traveling around a blind corner.

Both can be described as Incidents and should be investigated

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Incident Investigation

Why investigate an incident?

- **Fault**
 - A defect or imperfection; flaw. Suggests that a person is unable to control a particular impulse or response.
- **Cause**
 - A person that acts or a thing that occurs so as to produce a specific result. A basis for some belief, action, fact or event.

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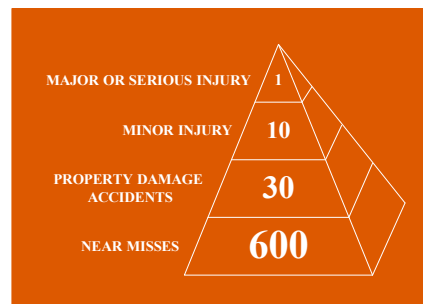


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Safety Study

1943, 1969
1,753,498 reported accidents
297 companies
21 different industrial groups
1,750,000 employees
Over 3 billion hours worked



Bird Jr., Frank E. and Germain, George L. *Practical Loss Control Leadership*. Loganville, Georgia: International Loss Control Institute, Inc., 1992. Print.

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Question 1

A team of iron workers have been assigned to replace defective structural beams and make other necessary repairs on the bottom level of a bridge that spans a river. Because they are working on an elevated structure they each use a personal fall arrest system. Using a full body harness is the suggested method of fall protection for this project. As one of the workers was donning his full body harness, a co-worker notices that his harness strap is partially torn. How would you classify this incident?

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Question 2

Same Scenario with Iron workers, but suppose the torn harness strap has gone unnoticed. As the iron worker positioned himself on a beam, to cut away rusted bridge supports with a torch, he loses his balance and falls. Although he was properly tethered to an anchor point, his torn harness failed and he falls to his death.

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Question 3

Worker almost falls into an open manhole that is not barricaded.

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Question 4

Construction worker drops a tool from the 14th floor of a building, striking the windshield of a vehicle parked below, and shattering it.

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Question 5

While performing a Lockout Tagout procedure, the electrician notices that several of the disconnect switches are mislabeled which could lead to the wrong equipment being isolated and de-energized.

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Question 6

A welder begins welding on a flammable liquids tank when he is abruptly stopped by the foreman because the LOTO and Hot Work Permit had not yet been performed in this area.

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Terms and Definitions

Incident Investigation

- A structured process of discovering the sequence of events that produced an incident to determine the causal factors and identify corrective actions to prevent recurrence.

Corrective Actions

- The actions taken to prevent recurrence of the accident.

Causal Factors

- Events and circumstances that occurred prior to the incident and led to or contributed to the outcome of the incident.

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Why is it important to Investigate Incidents?

Watch video: The Human Cost of Gasoline

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Benefits of an Effective Incident Investigation System

- Determine the real causes
- Determine the risks
- Develop controls
- Identify trends
- Prevent recurrence
- Improve Safety & Health (Risk Control) System
- Improve Safety & Health Culture & Employee Perception
- Demonstrate Care & Concern for Employees

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The Incident Investigation System

Goals of Incident Investigation

- Determine the sequence of events
- Determine the basic and root causes
- Recommend appropriate corrective actions that will prevent recurrence

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Promote a Positive Workplace

- Focus on the root causes, not blame or fault
- Although a supervisor sometimes conducts incident investigations, they should be conducted by a team
- Working together will also encourage all parties to "own" the conclusions and recommendations and to jointly ensure that corrective actions are implemented in a timely manner
- These approaches improve the safety management system as well

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Incidents

- Occurrence is due to unsafe behaviors, unsafe conditions or a combination of the two

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Unsafe Behaviors

There are only two reasons why someone performs an unsafe behavior...what are they?

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They didn't know it was unsafe



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They knew it was unsafe and chose to do it anyway



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Direct unsafe behaviors



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Indirect unsafe behaviors



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| IF... | WHY... |
|--|---|
| A procedure or safety rule was not followed... | Was the procedure or rule not followed? |
| Production pressures play a role... | Were production pressures permitted to jeopardize safety? |
| Procedure is out-of-date or safety training is inadequate... | Had the problem not been previously identified? |
| If it had been identified... | Why wasn't it addressed? |

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The Investigation Plan Identifies

WHO

- Who to notify
- Who contacts police, fire, etc.
- Who conducts investigation
- Who receives/acts on reports

WHEN

- Timetables for investigation and follow-up

HOW

- Requirements to conduct investigator training

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OSHA Reporting Requirements

All work-related fatalities, work-related inpatient hospitalizations of one or more employees, work-related amputations, work-related losses of an eye



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The Incident Investigation System

Components of an effective Incident Investigation System

- Policy and Procedure
- Reporting Processes
- Notification Processes
- Investigative Techniques
- Corrective Action Identification, Execution, and Follow-up
- Documentation and Retention

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The Incident Investigation System

Policy and Procedure

- Establishes formal leadership commitment to process
- Defines roles & responsibilities
- Defines terms
- Outlines specific procedures to be followed
- Identifies training needs
- Establishes review cycles
- Outlines documentation procedures



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The Incident Investigation System

Leaders must support the system for it to be effective:

- Creating a culture of continuous improvement and learning
- Allowing sufficient time for training, investigations, follow-up
- Providing resources for corrective action implementation
- Avoiding fault-finding mentality
- Demonstrating care and concern for employees involved in an incident
- Reassurance that employees will not be retaliated against.

"If an accident occurs in our department, our whole day just changed!"
Doug Sterbenz, VP Operations, Westar Energy Corp.

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The Incident Investigation Process

Phases of Incident Investigation



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The Incident Investigation System

Are you ready for an Incident?

Incident Investigation Preparation Tools

- Formal Written Policy
- Emergency Response Plan (Crisis Management Plan)
- Incident investigation training
- Incident investigation kit
- Incident Investigation Data Management System

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