

INCIDENT INVESTIGATION

Dave Sitar
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INCIDENT INVESTIGATION

DISCUSSION TOPICS

- **Understand the Principles of Incident Investigation**
- **Understand Incident Investigation Terminology**
- **Increase Awareness of Incident Facts And Fallacies**
- **Understand the Rationale for Investigating Incidents**
- **Importance of Proper Cause Analysis**
- **Development of Recommendations for Corrective Actions**

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PRINCIPALS OF INCIDENT INVESTIGATION

➤ The Principal of Multiple Causes

- Accidents or other problems are seldom, if ever, the result of a single cause

➤ The Principle of Basic Causes

- Solutions to problems are more effective when they treat the basic or root causes

➤ Minimizing Loss

- Minimizing loss is as much improvement as maximization of profit

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TERMINOLOGY

➤ Hazard

- **Situation exists that will, if left unattended, lead to an incident. It can be an unsafe condition or act or even an attitude**

➤ Near Miss

- **An undesired event which, under slightly different circumstances, could have resulted in harm to people, damage to property or loss of process**

➤ Incident

- **An undesired event that results in, or could have resulted in, harm to people, damage to property or loss of process**

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TERMINOLOGY (continued)

➤ Immediate Causes (Direct Causes)

- Circumstances that usually precede an incident
- Cause of the injury or loss
- Can be seen or sensed
- Easiest to determine in an investigation, aka unsafe acts or conditions

➤ Root Causes (Underlying or Basic Causes)

- Real causes behind the incident
- Reason why the substandard acts and conditions occurred or were allowed to exist
- Difficult to determine (often missed) aka personal and job factors

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TERMINOLOGY (continued)

➤ Incident Report

- Timely report of the occurrence of the incident containing description of initial events, facts, immediate consequences and actions, status, etc.

➤ Incident Investigation

- A systematic approach to review the facts and to determine underlying causes that allowed the accident to happen

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BASIC FACTS RELATED TO INCIDENTS

- **All Incidents are Caused “Shit DOESN’T happen”**
- **The Direct Cause Results in the Injury, the Root Cause Resulted in the Incident Itself**
- **The Cause of the Incident was a Hazard Before the Incident Occurred**
- **A Supervisor Using a Team Approach Can Eliminate 50 % of the Hazards & Therefore, 50 % of the Incidents**
- **The Majority of Incidents are Caused by System Failures, not Individuals**
- **Many Incidents Occur due to a Deviation from an Accepted Practice**

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FALLACIES RELATED TO INCIDENT INVESTIGATION

- **Incidents are Investigated to Find Someone to Blame**
- **Incidents Just Happen**
- **Carelessness is the Most Common Cause of Incidents**
 - **Clumsiness is the second, followed by stupidity**
- **It is Automatically Assumed the Worker Did Something Wrong**
- **Incidents are Only Caused by One Cause**
- **It's Always Management's Fault**
- **It's Always the Worker's Fault**

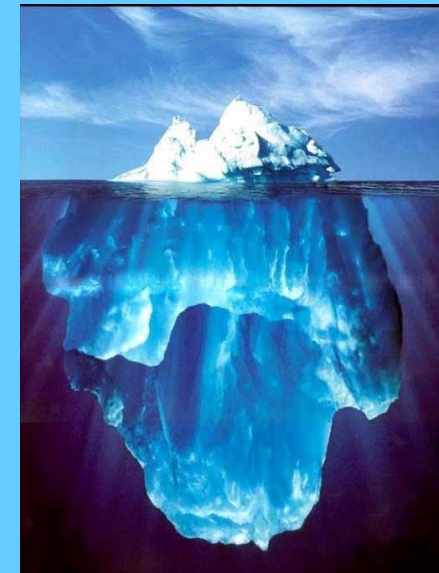
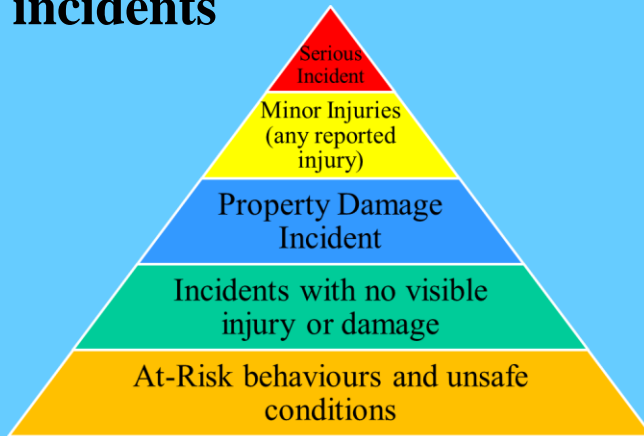
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INCIDENTS REQUIRING INVESTIGATION

- **All Incidents and Near Misses Require Some Form of Investigation**
 - **Incidents involving serious potential for injuries or process loss are to be investigated more thoroughly**
 - **Do not minimize importance of less serious or repetitive incidents**



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PURPOSE & BENEFITS OF AN INCIDENT INVESTIGATION

- **To Prevent a Similar Incident From Re-occurring By**
 - **Identifying the root cause, not just the direct/immediate cause**
 - **Development of preventive measures to prevent recurrence**
- **Determines the Risk of Recurrence of a Similar Incident**
- **Identifies, Defines and Increases Awareness of Trends**
 - **Develops methods to deal with trends**
- **Demonstrates Concern of the Company**
 - **Regarding employee's welfare and in implementing measures to prevent recurrence**

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RESULTS EXPECTED FROM AN INCIDENT INVESTIGATION

- **Accurate, Unbiased Summary of Facts**
- **Determination of Direct & Indirect Causes**
- **Recommendations for Corrective Actions**
- **Positive Effect on Morale**
- **Analysis of Direct & Indirect Costs (if required)**

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Factors that contribute to incidents may include:



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INCIDENT INVESTIGATION FUNDAMENTALS (ct'd)

➤ What

- Work or process was being conducted
- Types of materials, process, equipment, or conditions involved

➤ How

- How did incident happen
- Include contributing factors
- Include applicable status conditions of process or equipment

➤ Why

- Why did the accident occur

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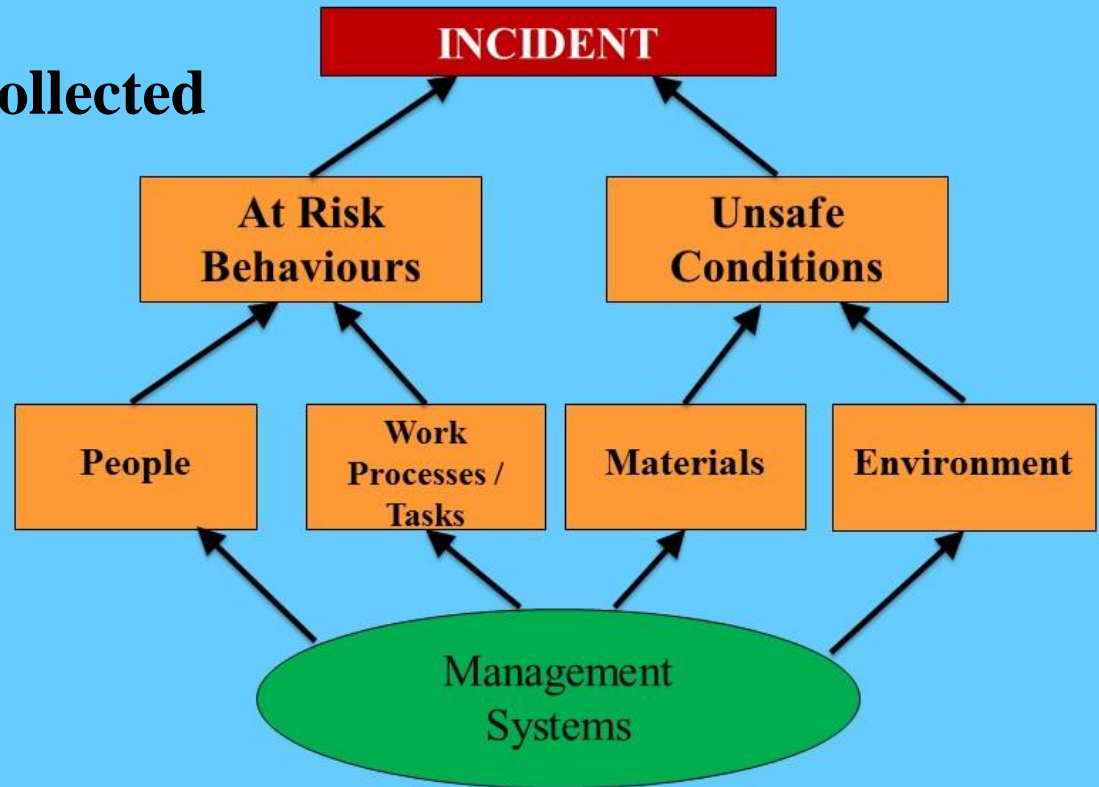
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CAUSE ANALYSIS

➤ Evaluate Data Collected

Direct Causes

Root Causes



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USE CAUSE ANALYSIS TO DEVELOP RECOMMENDATIONS TO PREVENT RE-OCCURRENCE

➤ Recommendations to Prevent Re-Occurrence

- Systematic and logical solutions more likely to work
- Address the Direct /Immediate causes
 - Cause of the injury or damage
 - Substandard act or conditions
- Address the Root / Underlying causes
 - Usually the cause of the incident (multiple)
 - Personal factors
 - Job factors

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➤ **Assign Responsibilities for Recommendations**

- **Assigned to specific individuals with deadlines**
 - **Management may re-assign responsibilities to proper individuals**

➤ **Monitoring of Implemented Recommendations**

- **Monitored for problems or issues that may be created**
- **Implemented recommendation may have to be modified**

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REASONS WHY INCIDENTS ARE NOT REPORTED

- **Afraid of Discipline from Supervisor**
- **Concerned About Ridicule From Co-workers**
- **Do Not Want to Affect Area Safety Record**
 - **Effect on team or personal safety awards or bonus**
- **Dislike of “Red Tape” and Reluctance to Use Forms**
- **Lack of Knowledge of Reporting Requirements**

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STEPS TO CONSIDER TO INCREASE INCIDENT REPORTING

- **Encourage Individuals to Increase Incident Reporting**
 - **Provide positive feed back from management**
- **Include Incident Reporting in New Employee Training and Orientations**
- **Act Immediately on Reports**
 - **Ensure investigations done promptly as per risk assessment**
 - **Implement corrective actions to prevent recurrence**
 - **Communicate results back to affected employees**
 - **Train employees in each area for incident investigation**

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INCIDENT INVESTIGATION WORKSHOP DISCUSSION

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