

How to Conduct Effective Incident Investigations

May 25, 2023



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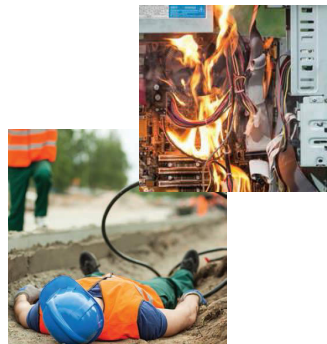


Online Evaluation



Investigation Goal - prevent future incidents

- Identify and eliminate hazards
- Expose deficiencies so corrective action can take place
- Fulfill legal and comp requirements



Incident [Accident] Investigations: A Guide for Employers

Your company experienced an incident that resulted (or almost resulted) in a worker injury or illness...Now what?

As a responsible employer, you need to react quickly to the incident with a prescribed investigation procedure for finding the root causes and implementing corrective actions. Quick and planned actions demonstrate your company's commitment to the safety and health of your workers, and your willingness to improve your safety and health management program to prevent future incidents.



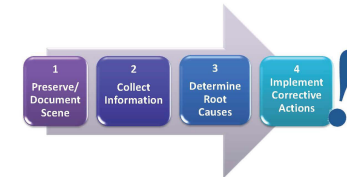


Investigate Programs, Not Behaviors

- “As stated previously, incident investigations that follow a systems approach are based on the principle that the root causes of an incident can be traced back to failures of the programs that manage safety and health in the workplace.”
- “In a systems approach, investigations do not focus primarily on the behaviors of the workers closest to the incidents, but on the factors [program deficiencies] that prompted such behaviors. The goal is to change the conditions under which people work by eliminating or reducing the factors that create unsafe conditions.”



INCIDENT [ACCIDENT] INVESTIGATIONS: A GUIDE FOR EMPLOYERS



A SYSTEMS APPROACH TO HELP PREVENT INJURIES AND ILLNESSES



Investigation Mental Preparation

- Knowledge
- Skills
- Emotional





Investigation Questions/Controversy

- Accident vs Incident
- What warrants investigation?
- How to protect against lawsuits?
- Is legal counsel needed?



Definitions

- *Accident* - unplanned, unwanted, but controllable event, disrupts work process and causes injury
- *Incident* – unplanned and unwanted event disrupts work and has potential of injury, harm, or damage to persons or property.



DEFINITIONS: INCIDENT

BC Chapter 33 - 2014	BC Chapter 2 - 2022
<p>ACCIDENT. An occurrence directly caused by construction or demolition activity or site conditions that result in one or more of the following:</p> <ol style="list-style-type: none"> 1. A fatality to a member of the public, or 2. Any type of injury to a member of the public; or 3. A fatality to a worker; or 4. An injury to a worker that requires transport by emergency medical services or requires immediate emergency care at a hospital or offsite medical clinic; or 5. Any complete or partial structural collapse or material failure; or 6. Any complete or partial collapse or failure of pedestrian protection, scaffolding, hoisting equipment, or material handling equipment; or 7. Any material fall exterior to the building or structure. 	<p>INCIDENT. An occurrence directly caused by construction or demolition activity or site conditions that result in one or more of the following:</p> <ol style="list-style-type: none"> 1. A fatality to a member of the public; 2. Any type of injury to a member of the public; 3. A fatality to a worker; 4. An injury to a worker that requires transport by emergency medical services or requires immediate emergency care at a hospital or offsite medical clinic; 5. Any complete or partial structural collapse or material failure; 6. Any complete or partial collapse or failure of pedestrian protection, scaffolding, hoisting equipment, or material handling equipment; or 7. Any material fall exterior to the building or structure.

build safe | live safe

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Lawsuits / Legal counsel needs

Factors Affecting Lawsuits and Outcome

- Applicability of Workers Comp
- Severity of injuries
- Impact on plaintiff
- Cost/duration of treatment and recovery
- Emotional and psychological damage
- Certainty of liability
- Cost of litigation
- Time to get a verdict
- Costs beyond litigation





Lawsuits / Legal counsel needs

Legal Protections Against Disclosure

- Attorney-client privilege
- Attorney work-product doctrine
- Self-critical analysis privilege

Factors Affecting Protections

- Purpose
- Jurisdiction (State)
- Use of outside counsel for fact-finding, investigative, and analysis efforts



What warrants investigation?



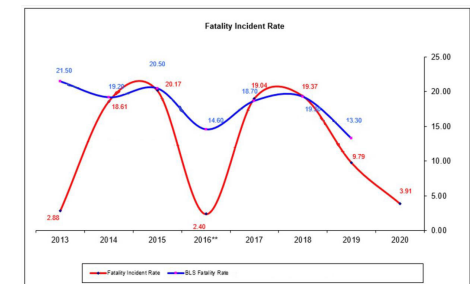
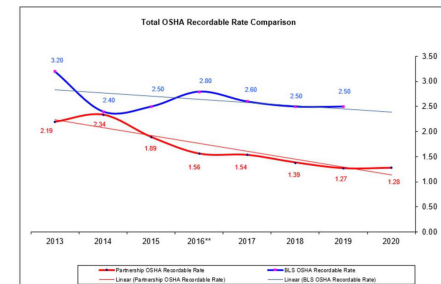
WHAT GETS INVESTIGATED

Factors to consider:

- staff skills and knowledge
- equipment needed
- time needed
- budget
- severity of the injury
- potential severity of injury
- accident history



WHAT GETS INVESTIGATED

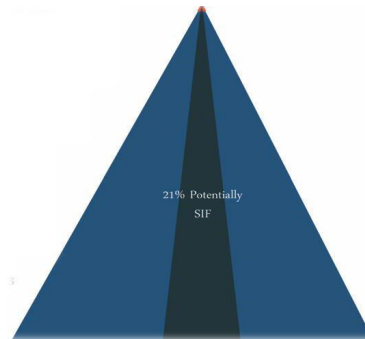




WHAT GETS INVESTIGATED

Industry Focus

- Serious Injuries and Fatalities (SIF)
- Potential Serious Injuries and Fatalities (PSIF)



WHO SHOULD INVESTIGATE

INCIDENT TYPE	INVESTIGATIVE TEAM
Fatalities	Company Safety Representative, consultants expertise related to incident, legal counsel
OSHA Reportable (amputations, etc.), serious injuries (ex. lost time) and significant property loss (ex. crane collapse)	Company Safety Representative, health and safety committee, union rep (if applicable), consultants with expertise related to incident, legal counsel
No actual injury, but high potential for injury/significant property loss	Employees with knowledge of work, supervisor, Company Safety Representative, health and safety committee, union rep (if applicable)
OSHA Recordable	Employees with knowledge of work, supervisor, Company Safety Representative, health and safety committee, union rep (if applicable)
No actual injury and potential for only minor injury/low property loss	Employees with knowledge of work, supervisor, Company Safety Representative (optional)



Investigation Goal - prevent future incidents

- Identify and eliminate hazards,
- Expose deficiencies so corrective action can take place
- Fulfill legal and comp requirements



WHAT SHOULD THE RESULTS BE

Causes

- Direct Cause
- Indirect Cause
- Root Cause

Precursors

- Reasonably detectable event, condition, or action that serves as warning sign of event
- An unmitigated High Risk situation that will eventually result in a serious injury or fatality if allowed to continue



WHAT SHOULD THE RESULTS BE

- **Direct Cause** – unplanned release of energy or hazardous materials
- **Indirect Cause** – unsafe acts and/or unsafe conditions
- **Root Cause** – policies and decisions, personal factors, environmental factors



CRSA Precursor Analysis Study

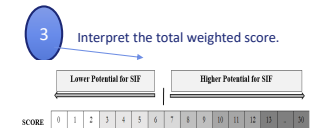


SIF Precursor Scorecard

PRECURSORS	(check if present)	WEIGHT
Safe Work Procedure	<input type="checkbox"/>	3
Hazard Recognition	<input type="checkbox"/>	2
Departure from Routine	<input type="checkbox"/>	3
Plan to Address Change	<input type="checkbox"/>	1
Safety Attitudes	<input type="checkbox"/>	1
Rules and Procedures	<input type="checkbox"/>	3
Familiar with the Task	<input type="checkbox"/>	2
Risk Normalization	<input type="checkbox"/>	3
Productivity Pressure	<input type="checkbox"/>	3
Perceived Safety Culture	<input type="checkbox"/>	3
Stop Work Execution	<input type="checkbox"/>	2
Workers Inactive in Safety	<input type="checkbox"/>	2
Pre-Task Plan	<input type="checkbox"/>	3
TOTAL WEIGHTED SCORE:	SUM	

1 Check the precursors that were present before any intervention was made.

2 Find the sum of all the weights for the selected precursors.



SIMPLIFIED ROOT CAUSE APPROACH (The “five whys”)

Material on the scaffold deck fell and hit me on the head.

- 1) *Why?* – Someone kicked the materials and it fell from the scaffold.
- 2) *Why?* - Material was allowed to accumulate and there was no toeboard.
- 3) *Why?* – No one inspected the scaffold to ensure it was erected and used properly.
- 4) *Why?* - A competent person for scaffolding was not assigned to the jobsite.
- 5) *Why?* - There is no safety and health program addressing the safe use of scaffolds.



PRELIMINARY RESPONSE TO AN INCIDENT

- 1) Remove potential threats
- 2) Care for the injured and contact emergency medical personnel
- 3) Contact the Company Safety Representative or other appropriate contact
- 4) Preserve all potential evidence
- 5) Record as much information as possible
- 6) Quickly identify witnesses and keep them at the scene, but separate



STEPS OF INVESTIGATION

- 1 Prepare
- 2 Collect Evidence
- 3 Analysis
- 4 Report
- 5 Corrective Action



STEPS OF INVESTIGATION — 1) Prepare

- Develop an Incident Investigation Program
- Prepare an Investigation Kit
- Assess the preliminary response and be prepared
- Establish a plan for returning the scene to normal use.
- Report the incident to management
- Notify OSHA



STEPS OF INVESTIGATION — 1) Prepare

OSHA Notification:

- All work-related fatalities within 8 hours
- All work-related inpatient hospitalizations within 24 hours
- All amputations within 24 hours
- All losses of an eye within 24 hours



STEPS OF INVESTIGATION — 2) Collect Evidence

Incident Categories

- Task
- Material
- Work Environment
- Personnel
- Management

Types of Evidence

- Physical Evidence
- Witness Statements



Collect Evidence: Task

- Was a safe work procedure used?
- Had conditions changed to make the normal procedure unsafe?
- Were the appropriate tools and materials available?
- Were they used?
- Were safety devices working properly?
- Was lockout used when necessary?



Collect Evidence: Material

- Was there an equipment failure?
- What caused it to fail?
- Was the machinery poorly designed?
- Were hazardous products involved?
- Were they clearly identified?
- Was a less hazardous alternative product possible and available?
- Was the raw material substandard in some way?
- Should personal protective equipment (PPE) have been used?
- Was the PPE used?
- Were users of PPE properly educated and trained?



Collect Evidence: Personnel

- Did the worker follow the safe operating procedures?
- Were workers experienced in the work being done?
- Had they been adequately educated and trained?
- Can they physically do the work?
- What was the status of their health?
- Were they tired?
- Was fatigue or shiftwork an issue?
- Were they under stress (work or personal)?
- Was there pressure to meet a deadline/by-pass safety procedures?
- Was the pressure self-imposed or applied by supervision/ management? How?



Collect Evidence: Work Environment

- What were the weather conditions?
- Was poor housekeeping a problem?
- Was it too hot or too cold?
- Was noise a problem?
- Was there adequate light?
- Were toxic or hazardous gases, dusts, or fumes present?



Collect Evidence: Management

- Were safety rules communicated to and understood by all employees?
- Were written procedures and orientation available?
- Were the safe work procedures being enforced?
- Was there adequate supervision?
- Were workers educated and trained to do the work?
- Had hazards and risks been previously identified and assessed?
- Had procedures been developed to eliminate hazards or control risks?
- Were unsafe conditions corrected?
- Was regular maintenance of equipment carried out?
- Were regular safety inspections carried out?
- Had conditions/concerns been reported beforehand and action taken?



Collect Evidence: Physical Evidence

- tools/equipment or parts/pieces
- photos
- samples
- design specifications
- operating logs
- purchasing records
- previous reports/procedures
- equipment manuals
- job safety analysis reports
- training records
- drug testing in accordance with regulations and labor agreements



Collect Evidence: Sketches

- Make sketches large; 8" x 10" and clear
- Include "Incident Details"
- Include measurements, use permanent points
- Indicate directions
- Make notes on the sketch



Collect Evidence: Witness Statements

- Understand victim/witnesses may have experienced significant trauma
- Interviewees have certain rights
- Labor agreements must be honored.
- Focusing on the accuracy
- Develop a rapport with the interviewee
- Investigators should receive training



Collect Evidence: Witness Statements

Interviewing - "DOs"...

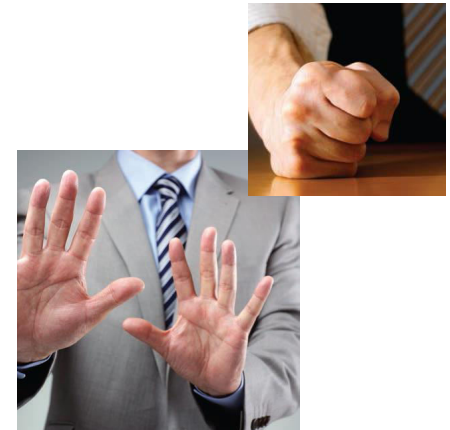
- Conduct interviews as soon as possible
- Put the witness, who is probably upset, at ease
- Emphasize reason for investigation
- Make short notes
- Ask if it is okay to record
- Let the witness talk, listen
- Confirm that you have the statement correct
- Try to sense any underlying feelings of the witness
- Close on a positive note



Collect Evidence: Witness Statements

Interviewing - "DON'Ts"...

- Intimidate the witness
- Interrupt
- Prompt
- Ask leading questions
- Show your own emotions
- Jump to conclusions



Collect Evidence: Witness Statements

Interviewing - Ask open-ended questions

- Where were you at the time of the incident?
- What were you doing at the time?
- What did you see, hear?
- What were work environment conditions (weather, light, noise, etc.)?
- What was (were) the injured worker(s) doing at the time?
- In your opinion, what caused the incident?
- How might similar incidents be prevented in the future?



STEPS OF INVESTIGATION — 3) Analysis

- Assemble all information to be able to review at one time
- Look for all pertinent facts
- Separate facts from opinion
- Review, correlate and pose hypothetical causes
- Keep an open mind to all possibilities
- If gaps in understanding, re-interview/look for other data
- Outline potential direct, indirect, contributing and root causes
- Have an independent review
- Test potential causes
- Check conclusions



STEPS OF INVESTIGATION — 4) Report

A. Administrative

- 1) Incident Identification
- 2) Investigation Team
- 3) Investigation Completion Date
- 4) Report Audience



STEPS OF INVESTIGATION — 4) Report

B. Basic Incident Information

- 1) Who was injured and details of the injury
- 2) Incident logistics
- 3) Affected property and extent of any damage
- 4) Medical response



STEPS OF INVESTIGATION — 4) Report

C. Description of the Incident

- 1) Description of what happened in detail

D. Evidence

- 1) Physical Evidence
 - a) Sketch of the incident scene
 - b) Photographs and diagrams
 - c) Other (maintenance records, tests, etc.)
- 2) Witness Statements



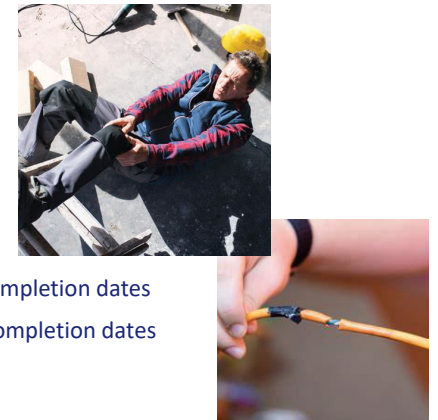
STEPS OF INVESTIGATION — 4) Report

E. Causes

- 1) Direct causes
- 2) Indirect or root causes
- 3) Contributing factors

F. Corrective

- 1) Immediate actions taken
- 2) Short term action with target completion dates
- 3) Long-term actions with target completion dates



STEPS OF INVESTIGATION — 4) Report

Incident Result Complications

- Investigation reveals human error, negligence or intentional acts
- Person responsible may management

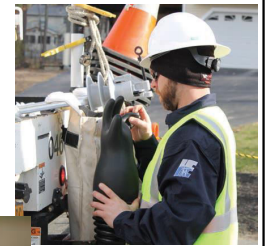
Regardless

- Errors must be pointed
- Include related conclusions
- Do not recommend discipline
- Actions should be taken by management
 - Company disciplinary policies
 - Normal personnel procedures should be followed.
 - Must be well documented and action taken must reference work rules
 - Note no action was taken in retaliation for an injury or the reporting of it



STEPS OF INVESTIGATION — 5) Corrective Actions

- Respond to recommendations
- Monitor scheduled actions completed
- Check condition of injured worker(s)
- Educate and train other workers at risk
- Re-orient worker(s) on their return to work
- Review to assure correction is effective needed.



SUMMARY

- Determine what gets investigated
- Identify who will investigate
- Incorporate the “five whys” (Root Cause Analysis) in investigation)
- Complete the 5 steps of an investigation
 1. Prepare
 2. Collect Evidence
 3. Perform an Analysis
 4. Report
 5. Recommend and complete Corrective Actions



Guide to Incident Investigations

Review Questions

1. Which of the following is **NOT** the a goal of an investigation?
 - a. Determine the root cause
 - b. Prevent future incidents
 - c. Determine appropriate disciplinary measures for those who caused the incident





Guide to Incident Investigations

Review Questions

2. What is the purpose of the “five whys”?
- a. To push the interviewee into answering questions honestly
 - b. To get the interviewee to repeat information so that you can accurately record their answer
 - c. To get to the Root Cause



Guide to Incident Investigations

Review Questions

3. Which of the following is a correct interview strategy:
- a. Let the witness talk, listen
 - b. Intimidate the witness
 - c. Let the interviewee know how you feel about their responses



Guide to Incident Investigations

Review Questions

4. Which of the following is the first step in your preliminary response to an incident?
- a. Care for the injured and contact emergency medical personnel
 - b. Quickly identify witnesses and keep them at the scene, but separate
 - c. Remove potential threats



Guide to Incident Investigations

Review Questions

5. What are the incident categories of evidence?
- a. Task, Material, Work Environment, Personnel, Management
 - b. Physical Evidence, Witness Statements
 - c. None of the above



Questions?

Please complete the Online Evaluation

