



The Ultimate
**ACCIDENT
INVESTIGATOR'S**
Guide

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A comprehensive, step-by-step guide to help you investigate and analyze accidents, uncover root causes, and make recommendations that improve your company's Safety Management System.

PREVIEW

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The Ultimate Accident Investigator's Guide

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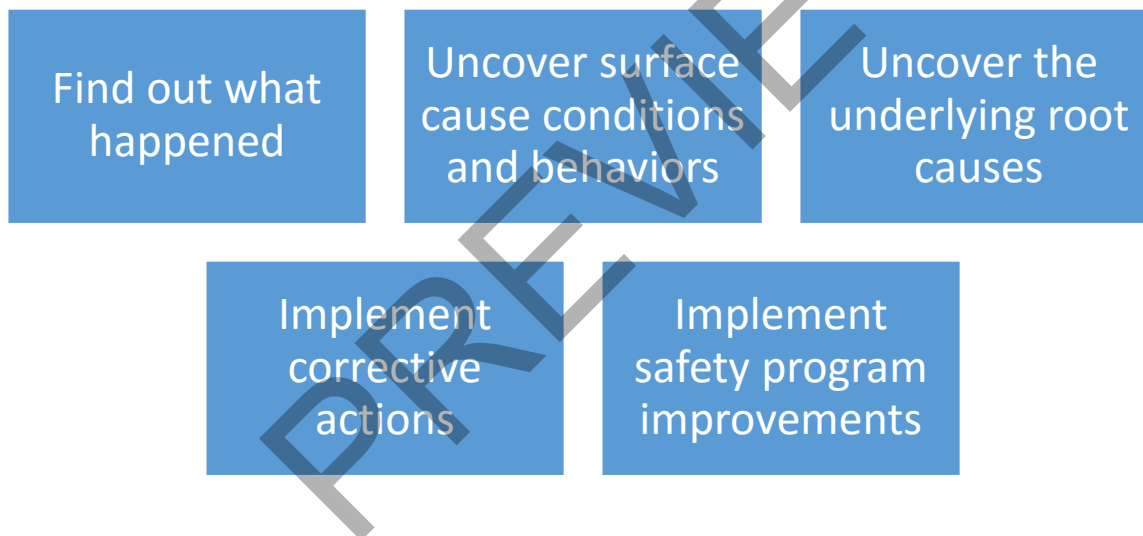
PREVIEW

INTRODUCTION

Why Conduct an Accident Investigation?

As an accident investigator, it is important to know from the start that the purpose of the investigation is to prevent recurrence. Accident investigations prevent recurrence by helping you achieve the following:

1. Find out what happened.
2. Uncover surface cause conditions and behaviors.
3. Uncover the underlying root causes.
4. Implement corrective actions.
5. Implement safety program improvements.



Fix the System, Not the Blame

As you can see above, the purpose of the investigation is to ultimately correct conditions and behaviors and to improve safety program, policies, processes, plans, procedures, work instructions, rules, and guidelines.

The report should not state who is to blame.

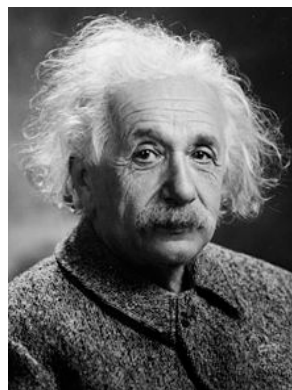
As the investigator, you should not do or say anything that implies you are trying to place blame on the injured employee or others. Why? If the purpose of the investigation is to establish fault, then when

enough data is obtained to establish fault (usually that does not take long), the process stops, and analysis of the safety management system (SMS) does not occur.

Placing blame and discipline are not appropriate unless the employee violated stated safety policies or rules and the safety management system did not contribute to that behavior. You will not have enough information to accurately determine fault until the accident investigation that includes SMS evaluation has been completed. If you discover root causes that contributed to the accident, forget about discipline: It won't be justified. If you and the Safety Department can't find root causes that contributed to the condition/behaviors that caused the accident, then there may be justification for discipline and that determination is made by conducting a personal performance appraisal of the specific behavior: A completely different process.

The error made by the employee may not be even the most important contributing cause. The employee who has not followed prescribed procedures may have been encouraged directly or indirectly by a supervisor or production quotas to "cut corners." The prescribed procedures may not be practical, or even safe, in the eyes of the employee(s). Sometimes where elaborate and difficult procedures are required, engineering redesign might be a better answer. In such cases, management errors -- not employee error -- may be the most important contributing causes. Even if injured workers openly blame themselves for making a mistake or not following prescribed procedures, you must not be satisfied that all contributing causes have been identified.

“CONDEMNATION WITHOUT INVESTIGATION IS THE HEIGHT OF IGNORANCE.” ALBERT EINSTEIN



Accident investigators must describe causes carefully and clearly. When reviewing accident investigation reports, the Safety Department should be on the lookout for catch-phrases, for example, "Employee did not plan job properly." While such a statement may suggest an underlying problem with this worker, it is not conducive to identifying all possible causes, preventions, and controls. Certainly, it is too late to plan

a job when the employee is about to do it. Further, it is unlikely safe work will always result when each employee is expected to plan procedures alone.

WHEN THE PURPOSE OF THE INVESTIGATION IS ACHIEVED, IT STOPS

Accident investigations that primarily attempt to fix the blame stop once the investigator believes the fault has been established. Such investigations will make some kind of claim that the victim:

- was lazy
- lacked common sense
- was careless
- should have known better
- was dumb or stupid
- was inattentive
- was accident-prone
- had a poor attitude

The investigator who quickly arrives at these "causes" for an accident is committing an attribution error. The investigator mistakenly attributes a performance failure to personal causes before considering external factors that may be contributing to the behavior.

Investigations that take this "Band-Aid" approach by merely fixing blame rarely analyze and evaluate safety programs. Consequently, similar accidents occur repeatedly.

When Do You Conduct an Investigation?

All accidents, no matter how minor, should be investigated. Near-miss investigation allows you to identify and control hazards before they cause a more serious accident. The injury/accident investigation is a tool for uncovering hazards that either were missed earlier or have managed to slip out of the controls planned for them. It is useful only when done with the aim of discovering every contributing factor to the accident to "foolproof" the condition and/or activity and prevent future occurrences.

Who Should Investigate?

Usually, the accident investigator is the supervisor in charge of the involved area and/or activity. Investigations represent a good way to involve employees in safety and health. Employee involvement will not only give you additional expertise and insight, but, in the eyes of the workers, will lend credibility to the results. Employee involvement also benefits the involved employees by educating them about potential hazards, and the experience usually makes them believers in the importance of safety,

thus strengthening the safety culture of the organization. The Safety Committee may participate in the investigation or review the investigative findings and recommendations involving serious injury or extensive property damage.

Implications of Accident Investigations

Recommended preventive actions should make it very difficult, if not impossible, for the accident to reoccur. The investigative report should list all the ways to "foolproof" the condition or activity. Considerations of cost or engineering should not enter at this stage. The primary purpose of accident investigations is to prevent future occurrences. Beyond this immediate purpose, the information obtained through the investigation should be used to update and revise the inventory of hazards, and/or the program for hazard prevention and control. For example, the Job Safety Analysis should be revised and employees retrained to the extent that it fully reflects the recommendations made by an accident report. Implications from the root causes of the accident need to be analyzed for their impact on all other operations and procedures.

BENEFITS OF THE INVESTIGATION

Ted S. Ferry, a well-recognized expert in accident analysis and author of *Modern Accident Investigation and Analysis*, lists a number of objectives of accident investigation (included below). We should also think of these objectives as benefits of effective accident investigation. The list could be greatly expanded. The rationale for each objective is usually self-evident.

- Reduce danger to employees.
- Prevent company resource loss.
- Prevent further mishaps.
- Respond to management needs.
- Prevent loss of trained personnel.
- Develop costing information.
- Improve operating efficiency.
- Provide answers to public concern.
- Define operating errors.
- Define management errors.
- Satisfy company rules.
- Reduce work process disruption.
- Provide protection against litigation.
- Satisfy insurance requirements.
- Improve company products.
- Educate supervisors and managers.
- Develop cost information.
- Anticipate government interest.
- Identify errors in procedures.
- Comply with workers' compensation.
- Satisfy regulatory requirements.
- Improve quality control and reliability.
- Isolate design deficiencies.
- Satisfy news media.

The order of listing is not important. Commonly voiced objectives that lack sound reasoning are not included. Samples of those are (1) do it for the sake of appearances, (2) justify safety manager's job, and (3) "hang someone to set an example."

Investigating to determine liability is quite different from the objective of defining management errors. While it may seem that one good investigation would serve all purposes, for legal reasons and practical expenditure of resources, this is not feasible. It is true the more complete and in-depth an investigation is, the more likely it is to serve more objectives. However, it is not practical to investigate each minor injury or mishap as if the survival of the organization depended on it. (Source: *Modern Accident Investigation and Analysis*, Ted S. Ferry, p.4)

Steps to Conducting an Accident Investigation

There are three phases and six steps to conducting an accident investigation:

- a. Phase One: Gather the Facts
 1. Secure the Accident Scene (if required)
 2. Collect Pertinent Information
- b. Phase Two: Analyze the Facts
 3. Develop the Sequence of Events
 4. Uncover the Surface and Root Causes
- c. Phase Three: Report the Facts
 5. Recommend Corrective Actions and Program Improvement
 6. Write the Report

These will be discussed in the following sections.

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