

Avoid These 10 Investigation Mistakes

How much data you collect will greatly increase the probability of developing an effective corrective action.

by William R. Coffey, Jr.

"Those who can not remember the past are condemned to repeat it." There is no better sentiment to begin a discussion on accident investigation than this. It is a bad thing when a person is injured. It is a travesty when another person is injured in the exact same way because no action was taken when the first injury occurred. Accident investigation is a means to prevent the second injury.

An effective accident investigation program/policy is an essential piece of an organization's safety program. Some cautions must be kept in mind, however. First, accident investigations are only a component of a health and safety program. They are a piece of the whole, not the whole itself. Second, it is a reactive process. Future injuries may effectively be prevented--but to initiate the process, someone had to be injured (or almost injured). It is bad when the process is started with someone getting hurt; it is a tragedy if it is started because of a fatality.

With these issues in mind, accident investigations save a good amount of pain and suffering. There are some common pitfalls that should be discussed. After these "Top 10" mistakes are mentioned, we will discuss how they relate to the process as a whole.

1. Not Investigating Near Misses

If Heidenberg's principles of accident escalation are followed (i.e., near misses lead to first aid injuries, lead to minor injuries, lead to major injuries), then by investigating incidents at the OSHA recordable level (minor injuries and above), there is a wide assortment of incidents that have not been addressed. By not investigating these incidents, there is a depth of risk not being addressed and therefore still being faced. For an accident investigation program to reach its true potential, these incidents must be investigated. There are various ways these data can be captured:

* *Utilize the current accident investigation methods.* This can be done by broadening the criteria for an investigation. Is a full accident investigation initiated for a property damage case--when, for example, a beam is struck by a forklift? It could have just as easily been an employee who was struck, and the same level of concern should be shown it.

* *Accept employee recommendations/suggestions.* Is there an employee recommendation/suggestion program, and are employees encouraged to share instances where they or others were almost hurt in order to let management know of unsafe areas/acts they witness?

* *Tap inter-function communications.* Are there other teams, such as quality or environmental teams, where these issues may have arisen, and is the information passed on to the safety/investigation team?

* *Consider outside sources.* Are there other facilities in the company, trade associations,

networking groups, etc. that have similar operations where a near miss has occurred and the information can be shared?

Other sources may be available, but the key issue is that in order to help improve the effectiveness of an accident investigation program, these instances must be investigated.

2. Ineffective Corrective Actions

The investigation is done, corrective action is generated, and it places all of the blame on the inattention of the employee: "Be more careful next time." You must ask yourself at this point, hasn't any investigation beyond the most cursory investigation been performed? Just from this finding, a series of questions can be asked:

- * Why was the employee inattentive? In a rush? Dwelling on a personal issue?
- * How was the employee inattentive? Not following a procedure? Ignoring a warning?
- * When did the incident take place? Is it a time-of-day issue?
- * What was inattentive about his/her actions? Not looking at the area of operation?
Trying to race a machine?
- * Who was the main contributor to the incident? Did the injured person's or someone else's actions cause the incident? Are they inexperienced in the position? Do they need more training?
- * What part of the body was injured? Where did the incident take place? Was something in the work area contributory?

The key factor to consider is, has enough data been collected? Actually, a more accurate question to ask is, has all of the data been collected, or as in the case of "Be more careful," has just enough data been collected for a convenient answer and the investigator gone onto some other "more important" task?

The amount of data collected will greatly increase the probability of developing an effective corrective action. While it should be noted there are factors preventing effective corrective actions being generated for every accident investigation, if this becomes the excuse for not collecting all of the possible data, only questionable/superficial corrective actions will ever be generated.

3. Investigator Biases

As in any endeavor of discovery, biases in the investigation must be understood. By not recognizing these biases, the investigators will tend to find data and analysis that support a conclusion toward which they are biased. This is not necessarily a conscious decision, but is a facet of human nature.

By the same token, while some methodology is needed for effective investigations, it need not adhere to the tenets of the scientific method. Biases can be seen by reviewing previous accident investigations, findings, and corrective actions. Examples would include: the supervisor completing accident investigations and consistently finding employees at fault (i.e., employee wasn't paying attention, employee wasn't careful); and investigations done by hourly employees with findings and corrective actions that always

find unsafe conditions and never unsafe actions (i.e., employee injured due to unsafe machinery . . . even though employee was not following the safety procedure set forth).

The biases mentioned will tend to look at one element or the other instead of looking at the problem from a systematic view. It also should be noted that individual biases can lead investigators to fixate more on fault than resolving issues. A consistent investigation routine and structured reporting method (form) can help prevent biases.

4. Untimely Investigation

As common sense would dictate, the further you get from an event, the less clear the memory of the event is. Details that are relevant, while they may not seem important to the observer, may be lost because they are not captured soon enough after the event.

In theory, the investigation should be started as soon after the event as possible. At the very least, as many accounts of the incident as possible should be documented directly after it has happened. While it may be difficult to start the official investigation process, having the accounts (at a significant level of detail) is a way to capture the information for future analysis. Interviewees should be given the opportunity to discuss the incident in as much detail as they would like and should then be encouraged further. Once the investigation has begun, specific questions may be developed from these statements, and the original interviewee may be revisited.

5. Interview Biases/Untruthfulness

To get the most accurate data surrounding an incident, it would be hoped that participants and witnesses to the incident would provide accurate descriptions. This is not always the case, however. Participants may feel some of their actions may lead to "blame" (and, therefore, discipline) and may alter their statements to reflect their actions as acceptable.

Compound this factor with memory lag (the tendency of the memory of an event to be altered over time), and important data may be lost. This can be particularly confusing when these issues involve the major participants of the event. While you can strive to have an accident investigation program that is exclusive of discipline, this always will be a factor. Memory lag is part of the human condition; it may be subconscious, for the most part. The only way around these issues is to collect as much data as possible, whether objective (training records, physical layout, photos of the accident scene) or subjective (witness statements). By comparing the evidence in totality, discrepancies can be recognized and resolved. Without taking a total, systematic approach, these issues may not be recognized and, therefore, not be resolved.

6. Unskilled Investigators

To be effective in the use of most skills, a person must possess a combination of training and practice. A lack of skill in the process of accident investigations can lead to faulty conclusions, ineffective corrective actions, animosity toward the process, and a wide range of other unwanted outcomes. This is not to say investigations completed by new investigators are necessarily faulty, just that, as in any other area, the investigator must have the time and opportunity to develop these skills.

An investigation process that relies on investigators who have had no training, only occasionally conduct investigations, and do not have support services may have questionable results. Not only must time and energy be put forth to develop an investigation process, but resources must be put forth to develop the investigators themselves.

Either the skills of the investigator must be assured through training and practice, or an unskilled investigator must be compensated for through a rigid process or with review by a skilled investigator. Employing someone unskilled in investigations during an investigation does, however, have its place. An example of this would be having an operator on an investigative team regarding a specific piece of equipment he operates. The operator may not be skilled in investigative techniques; he's being utilized for his technical knowledge and works under the oversight of an experienced investigator. The key in this area is: Has any thought gone into the selection and preparation of investigators, or has it been thrown haphazardly onto someone?

7. Politics

The goal in an accident investigation is cause and effect analysis. Can the cause (reason) be found, which leads to the effect (injury/accident/near miss)? We would hope to give this the rigor of the scientific method, looking only at facts and, if warranted, expert opinion. Personal likes, dislikes, and other favoritisms should not enter into the investigation. Results can be skewed sometimes, however, due to politics between the investigators and the areas being investigated. Also, politics in the management or executive levels can draw resources away from investigations that are out of favor.

Politics also can play a counterproductive role in the generation of corrective actions. Corrective actions should be the most practical, feasible, and cost-effective solutions to the issues found during the investigation. Politics can lead to recommended corrective actions that are less practical, feasible, or economical.

8. Surface Causes Only

It is very tempting to begin looking at a situation, following the evidence trail, and pointing a finger to say this is the reason this accident happened. Unfortunately, you must resist this urge. While one item may stand out as the reason an incident occurred, you need to continue digging into the specifics of the situation to come to a definitive conclusion. Every avenue of investigation should be explored before coming to the conclusion the investigation is complete. To do otherwise negates the possibility of uncovering corrective actions that might prevent future injuries.

While all incidents cannot be investigated ad infinitum, there must be some standard of thoroughness to which investigators adhere. This phenomenon also leads to the "just be careful" corrective action. When an accident is investigated where an employee received an eye injury, it is tempting to chalk it up to the employee's lack of PPE use (specifically, eye protection). A corrective action can be suggested to discipline the employee or to retrain the employee on eye protection use. But is there a bigger picture? Why wasn't the employee using the eye protection? Did something change with the eye protection so she

was no longer comfortable? Is there some peculiarity of the task where wearing eye protection makes it difficult or impossible to perform? These are items that, if recognized and corrected, may extend past this one incident and prevent injuries throughout a facility. (Note, however, that at times, it is simply a single employee's behavior, and actions taken to address only that employee are warranted.)

9. Conflicting Objectives

The objective of an accident investigation is to prevent future injuries, correct? That is the main focus of investigations, but other objectives/priorities can get in the way. At times, investigators believe their prime objective is to lay blame for an incident, or to correct a quality problem that arose with the injury/near miss, or to ensure production quotas are met. These other objectives can be in conflict with the true intent of the accident investigation.

These conflicts can arise for a number of reasons, such as investigators not understanding the true intent or having their own interests in pursuing other objectives. The biggest concern is the loss of possible corrective actions. If the investigators are focused on finding blame, they will not look into systematic corrective actions. If they have a focus on production, they will not entertain corrective actions they perceive as decreasing production. The time to look at corrective actions that do not fit into their personal schemata will not be considered. Creating a peer panel may be effective in rooting out conflicting objectives due to investigators having their own agendas.

10. Uncooperative People/System

Preventing future injuries is positive for the employees (who are not getting hurt) and for the company (which recoups savings from worker's compensation costs). Unfortunately, the advantages of the situation are overshadowed by other concerns.

In these cases, an uncooperative situation may arise: employees unwilling to serve as investigators, provide information, or partake in corrective action generation are symptoms of this phenomenon. The feeling of discontent or lack of interest in the company in general can spill over to the safety arena.

There is a certain minimal level of cooperation needed to conduct effective accident investigations; if that level is not realized, the investigation and corrective actions will suffer. People may be uncooperative for varying reasons. The possibility of being found at fault, the possibility of having to change a longstanding practice, or emotional issues involving another workplace issue may cause it. This can apply to any employee, from hourly to senior manager. In fact, you can have this issue with whole departments, divisions, work groups, etc. This is an indication of an uncooperative system.

Lack of cooperation can be overt (refusing to meet or answer questions) or covert (answering minimally or withholding information). While the solutions to uncooperative employees or systems can appear simple (use of management's support of the investigation process), if this issue recurs it indicates a larger problem.

After all of the preceding information, you must be asking, "When does an accident investigation go right?" Accident investigation is a process. It is always developing. When the process starts, many of the above concerns may be present. Over time, an effective process develops.

While these 10 concerns never will be totally eliminated, their frequency will decline. A single investigation may be analyzed and criticized, but the process itself may be effective. If individual elements can be ineffective, how can the process itself be judged effective? As with other concerns, quantify and measure it. Measuring an investigation process can be difficult. Frankly, it depends on where you are in the process. Some points to consider:

- * The ultimate goal of any safety program is to reduce injuries. Is there a reduction? Lost time injuries could be the first criterion measured; as the process improves, reduction of OSHA recordables, first aid cases, and near misses are items to check for progress.
- * Measure the investigations themselves. What percentage of accidents is being investigated and how many of the near misses? What is the average time for an investigation to be started? To be completed?
- * Corrective actions can be tracked. This could start with the number of times "told employee to be careful" or "this accident will be brought up at department training/meeting/discussion" are the corrective actions on accident reports. As the process improves, the number of corrective actions generated, the amount of time to generate corrective actions, and the amount of time to implement corrective actions can be tracked. Strive for improvements in all three.

So you follow the above advice, give equal effort to all parts of the safety program, and reduce the incident rate to almost nothing. Perfection is achieved, and all can go on to other matters. Because the number of accidents is so low, accident investigation is no longer needed. This can be a terrible mistake. There will still be incidents to investigate. Instead of investigating and acting upon the lost time and recordable injuries, there will be first aid and near miss cases. By applying the diligence used in investigating the more serious cases, the minor cases will stay minor and will not develop into painful injuries.

This article originally appeared in the May 2005 issue of *Occupational Health & Safety*.

William R. Coffey, Jr. (BobCof@adelphia.net), CSP, CPEA, of Seven Valleys, Pa., has B.S. degrees in chemistry and psychology from the State University of New York (SUNY) at Stony Brook. He has held safety management positions at Glatfelter Paper Company, Safety-Kleen Corporation, and Capitol Manufacturing, Inc., among others.