

BASIC ACCIDENT ANALYSIS AND OBSERVATION

Dave Challburg
SAIF Corp.
Bend, Oregon

This paper will help describe the process of accident analysis. The critical steps in the process are explained in order to better understand the root causes of accidents and develop a clearer understanding of hazard corrective actions. Accident analysis fosters a fact-finding, not fault-finding attitude and promotes confidence in the final conclusions.

The primary objectives are to:

- ◆ Learn to identify and stop destructive behaviors
- ◆ Understand the benefits of the observation process
- ◆ Understand how to positively communicate observations
- ◆ Build on employee empowerment
- ◆ Learn the monitoring and tracking system
- ◆ Develop a prioritized observation and strategy plan

Accident Analysis Vocabulary

One of the first steps in successful accident and incident analysis is to think about the words you use and the messages they convey. Below are examples of some words that should become a part of your regular vocabulary, for example:

Analysis as opposed to investigation: Investigation tends to generate a negative connotation tied to the IRS, FBI and police. Investigation implies fault and blame.

Fact rather than fault: Facts lead to logical conclusions of causes and solutions for accident and incident prevention. Fault tends to blame the individual(s), and does not identify the real cause(s) of an accident or incident.

Best practices rather than common sense: Best practices can be identified, developed and monitored through observation and analysis. Employees can be trained to perform tasks in the safest method possible through the use of best practices.

The Observation Process

Injuries in the workplace can often be avoided using simple observation techniques. SAIF training uses an observation process to systematically observe workers, communicate with them, and prevent unsafe acts. The observation process encourages you to pay attention to what you do in a focused, effective way. Changes are not achieved by force, but by providing the opportunity to change. The observation process combines communication with safety observation skills to achieve its objectives. Effective observation is a pro-active element of the overall process for eliminating injuries in the work area.

The primary purpose of this observation process is to identify safe, positive employee behaviors and conditions. It includes providing immediate feedback. The secondary purpose is to identify unsafe behaviors and conditions which encourages positive feedback.

The observation process is not intended to be used a disciplinary tool. It requires a person who has high credibility with his or her peers, is knowledgeable about the work to be observed, and has good verbal and interpersonal skills. It provides a method for identifying safe and critical behaviors.

Benefits

The benefits of the observation process include the consistent use of best practices to develop safe work habits; employee empowerment and involvement to further improve cooperative relationships; a scheduled time and date for positive interaction with employees to improve appropriate and safe behaviors. A written schedule can be established for completing each observation as well as a written plan that will serve as a guideline when an accident occurs.

Employees can assist in the process of identifying the locations and priorities. Historical data and trends can also be helpful. Another consideration is the effect of neighboring departments will have on your operations and the observation schedule. Employees can also perform observations and provide feedback thus gaining knowledge about other work stations and job tasks.

Communication and Feedback

Once an observation is completed, provide the employee with positive feedback about his/her safety performance. Make your communication as positive as possible, e.g., "I'm glad to see you wearing your safety glasses during the parts-grinding process."

Opportunity

When the employee is provided with feedback regarding his/her behavior, there is then an opportunity to effect change. Positive communication validates present activity and procedures. When unsafe behaviors are identified, you have an opportunity to identify best practices and procedural changes. This is an opportunity for empowerment. Make the most of it by involving the employee in the solutions and coaching of their coworkers.

Monitoring

When observation results are recorded and reviewed with the appropriate employee, the total safe score should be logged into the monitoring and tracking system. This would include the date of the observation, the department, the work station, and the score.

Origin of Injuries

Research indicates that injuries come from:

Percent of occurrences	Cause of injury
2	Acts of God (those occurrences over which we have absolutely no control)
3 - 8	Unsafe conditions, equipment, environment, code violations
90 - 95	System failures (management policies and procedures; employee errors; unsafe activity; lack of training; inattention to task; physical capacity; lack of supervisor follow-up; risk taking behavior; lack of intervention; management attitude; common sense safety)

System failure is thus responsible for a vast majority of injuries and illnesses in the workplace. The following categorizes system failures.

Management policies: When management policies and procedures do not exist, or procedures do not address the risks of the business operations, confusion, indecision, and common sense flourish. Consistency in application of policies and procedures is crucial to overall loss prevention and best practices.

Employee errors: When employees choose to implement quick, easy, and convenient methods of task completion in lieu of best practices, the likelihood of injury is increased.

Unsafe activity: When an unsafe act is selected the outcome is uncertain. This is similar to playing the lottery or spinning the roulette wheel and leaving the outcome to chance. Examples of unsafe activity are: horseplay, improper lifting, or raising someone on the forks of a forklift.

Lack of training: When employees are not provided proper and adequate training, management relies on the employees to provide the safe method of task completion. Employees must be properly trained in best practices for safe task completion.

Inattention to task: When not focused on the task at hand, the risk of physical contact with hazards increases to a critical level. Damage to people and equipment almost always results.

Physical capacity: The duties need to be matched to the person in relationship to the expected outcome. They need to be provided with the proper equipment and tools to get the job done safely, in a timely manner.

Unsafe condition: Unsafe conditions exist when physical hazards are allowed, with little or no intervention. Examples are: slip, trip, and fall hazards; electrical hazards; unguarded machinery, etc. These conditions should be identified and corrected as soon as possible.

Lack of supervisor follow-up: When supervisors fail to follow-up with employee concerns or recommendations, employees will soon stop providing information. By not following-up on past changes, the supervisor can miss areas presenting additional, unanticipated problems. Lack of supervisor follow-up leads to poor morale and a belief that safety is of no concern to the company.

Risk taking behavior: Not believing or understanding the consequences of the action, risk taking behavior can dominate. Clearly defined procedures and feedback around expectations will reduce the undesired behavior.

Lack of intervention: When short cuts are taken to get production levels up, they increase the risk of injury. If management condones this behavior by not intervening, the management system has failed.

Management attitude: When management is not committed to providing a safe and healthy work environment, or does not demonstrate a true caring attitude toward employees, injuries and losses will increase. Management must firmly believe that no accident or personal damage is acceptable. When an injury does occur, corrective measures and best practices will be developed and implemented.

Common sense safety: Common sense is grading down to our lowest level of perceptions of life's experiences. You need to clearly define work practices. Spend time providing adequate training and observations to insure the best practice.

Accident Analysis

To successfully analyze accidents or incidences requires an understanding of the subtle differences between these two terms. Accidents involve an injury or some level of damage. Incidents are occurrences where injury or damage could have happened. Incidents are also commonly referred to as "near misses." The Accident Analysis worksheet includes: management, employee, equipment, environment, and an analysis and development of best practices.

Why should an accident analysis be conducted: The ultimate reason for conducting an accident analysis is to avoid future injuries through the identification of facts. The accident analysis process should not be used to place blame.

No person wants to get hurt. We need to conduct a thorough accident and incident analysis to identify the multiple causes of the accident. Then, based on the facts, develop best practices. This activity is designed to stop damaging people and stop human suffering.

A thorough accident and incident analysis will determine multiple causation and potential trends by department or area of responsibility. With the facts and data gathered in the process of the analysis, best practices can be developed and similar injuries will be reduced or eliminated. Best practices can be developed using the facts and data gathered in the process of the analysis. As a result, similar injuries will be reduced or eliminated.

When should you conduct an accident analysis? The analysis should begin immediately, regardless of accident severity. Of course, you need to deal with the immediate medical needs and to clear unsafe conditions. The analysis should begin as quickly as possible. If the analysis is not conducted in a timely manner, valuable information and facts may be lost. The memories of witnesses can fade, personnel may go on vacation or become unavailable. Witnesses will also have an opportunity to discuss viewpoints and opinions, thereby clouding the real facts.

Where should the analysis be conducted? The accident and incident analysis should be conducted at the scene, whenever possible. Utilize the resources available and have employees demonstrate or explain how the incident occurred. Have them discuss the activities leading up to the accident or incident.

What should be analyzed? All accidents and incidents should be analyzed, regardless of severity or outcome. The difference between an accident and incident is luck. The same unsafe behavior or unsafe condition may have existed, but the outcome was different. Do not rely on luck. Always analyze unsafe behaviors and unsafe conditions to identify best practices and corrective measures.

Who should conduct the analysis? The immediate supervisor or manager should be involved in conducting an accident and incident analysis because of their knowledge of equipment, environment and employee interactions.

The safety committee should be involved at the point of analyzing trends throughout all operations. Safety committees provide management with recommendations for changes in processes and best practices. Committee members should evaluate the effectiveness of the accident and incident analysis process and provide management with corrective recommendations.

Some businesses establish an analysis team and make the team responsible for conducting the analysis and for providing recommendations for corrective measures and best practices.

How is an accident or incident analysis conducted? The process begins with a conversation including all the involved parties. This is one of the most important factors in a successful analysis. Other factors that must be considered are:

- ◆ Each person should be questioned separately, when possible, to avoid contamination of perceptions and memories.
- ◆ Use open-ended questions such as why, how, where, etc. This will enable you to gain more information from the individuals involved.
- ◆ Gather all the facts possible and record them in the prescribed manner.
- ◆ When identifying best practices always involve the employees in the process. By engaging employees the effectiveness and success of the process is greatly enhanced.
- ◆ A follow-up of the process to ensure that the desired results are obtained is necessary.

Conclusions

The Observation Process and the Accident Analysis profile are designed to develop an environment free of injuries, hazards, and cruel humor. These methods will empower open and honest communication, utilize empathetic listening and foster mutual trust, mutual respect and mutual benefit.