

## **THE ROOT CAUSE(S) OF THE ACCIDENT**

Identifying root causes to accidents is one of the central ideas behind accident investigation, and getting to the contributing factors of the accident is what identifying the root cause(s) is all about. Before looking for root causes to accidents, it's important that you understand the difference between a symptom and a root cause.

A symptom is a contributing factor to an accident whereas, a root cause is the likely cause of the accident itself.

- A symptom/direct cause is the condition, event or action which directly resulted in the occurrence.
- A contributing cause is a cause associated with the occurrence, but which, by itself, would not have caused the occurrence.
- The root cause is a fundamental cause which, if identified, would permit root action to be taken, thus correcting and preventing a similar type of occurrence.

The tendency of accident investigation has been to focus on the immediate actions and conditions of the accident. While it is important to evaluate immediate actions and conditions, doing so will often lead to an emphasis on the individuals involved, which then tends to focus blame. Remember, the overall tone of any accident investigation should be that health and safety matters to this organization.

Root Cause Analysis is a consistent and repeatable process for analyzing incidents with a non-punitive objective. However, Root Cause Analysis is not a means to eliminate all hazards or to search for "the guilty". Neither does it intend to be a replacement for thinking of and caring for employees nor does it intend to replace accident investigation or reporting.

Root Cause Analysis is a thinking tool that can be used to analyze failures in processes. Root Cause Analysis is a methodology that systematically probes a problem to determine the basic (root) underlying cause of the failure.

Root Cause Analysis is to be completed for the following:

- All OSHA Recordable accidents
- All LTA's
- All incidents which could have resulted in serious injury, property damage, environmental damage or public disruption
- Groups of recurring theme accidents (i.e., falls, eye injuries, hand tool usage, ...)
- Major potential problems (i.e., falls, electrocution, ...)

### **1. EXAMINE EACH POTENTIAL CAUSE**

Once all of the possible causes have been identified, each one should be examined until a root cause is identified. At this point, it is important not to focus on one particular suspected cause, because all factors that led up to the accident need to be examined and eventually corrected.

The examination process is actually a series of questions, because identifying the root causes to accidents will usually center around the question “why,” or “why not.” By asking a series of “why” and “why not” questions, you should be one step closer to determining the root cause(s) of the accident. These questions might also help you determine the reasons for certain employee actions that led up to the accident.

## 2. EXAMINE THE REASONS FOR EMPLOYEE ACTIONS

When looking for root causes to an accident, determine why an employee acted the way they did prior to the accident. Or look at the specific conditions of the task just prior to the accident.

Some questions you may want to consider include:

- Was there something unusual or different about the job or task on the day of the accident?
- Was there a production push at the time the accident occurred?
- Was there a communications breakdown between employees or supervisors?
- Was the employee properly trained?
- Was personal protective equipment available?
- Was the employee in a hurry?
- Was the employee fatigued?
- Was there a lack of teamwork?
- Was the employee taking shortcuts to complete their task?
- Were there procedures that were inaccurate?
- Was the accident due to any external factor?
- Were tools being incorrectly used?

Identify the failures at a deep level in order to prevent, not only a reoccurrence of the accident, but all of the potential accidents stemming from the same root cause.

## 3. DETERMINE A ROOT CAUSE

Deciding on a root cause is ultimately what the accident investigation process is all about. There may be several causes of the accident, and not just one.

Root Cause Analysis involves:

- a. Looking at the overall effect that the accident had on people, property, products, and processes at your facility;
- b. Examining all potential causes of the accident; and
- c. Determining the reasons behind the employee actions that led up to the accident.

Utilize these three steps to determine a root cause or root causes of the accident. Next, use this information to develop the corrective and preventive actions that will help prevent future accidents.

#### 4. DEVELOP CORRECTIVE AND PREVENTIVE ACTIONS

Develop a list of corrective and preventive actions that will prevent future accidents. Corrective and preventive actions that should be recommended to upper management should be determined by:

- a. Evaluation of the root cause(s) of the accident
- b. How to reduce or eliminate root causes from all workplace activities.

Now that the root causes(s) of the accident has been determined, corrective and preventive actions must be put in place that will eliminate, or at least reduce, the chances of another accident occurring at your facility.

Re-examine the list of determined root causes of the accident. After the root cause(s) have been determined, recommendations for corrective and preventive actions are to follow. Developing an effective set of corrective and preventive actions starts with an evaluation of the identified root cause(s).

#### 5. EVALUATE THE ROOT CAUSE(S) OF THE ACCIDENT

After the root cause(s) of the accident have been identified, evaluate it/them to determine how the cause can be prevented from occurring in the future. With the help of other supervisors, managers, and employees, discuss quantitative ways to remove the root cause(s) from the system.