



## **Framework for Successful Accident Investigations**

Employee accidents are difficult to predict. However, they leave clues as to how and why they happened. We can then piece those clues together to help us determine the root cause(s) of the accident. These clues will also give us the tools to prevent future accidents from occurring. In this article, we will run through the steps that will help you conduct an effective accident investigation.

### **Purpose**

The reason we want to investigate accidents is to identify the reasons why the accident happened in the first place. We do not want to use the investigation to appoint blame. The purpose of the investigation is to keep similar accidents from happening in the future.

### **Who Conducts the Investigation**

Accident investigations do not solely fall upon the safety officer or risk manager. Anyone can investigate accidents as long as they are trained on how to do so. This is where your safety committee can step in. Train a few members on how to conduct investigations and use other committee members to assist in the process.

Others who can investigate accidents can include the fleet manager, building safety officer or the employee's supervisor. Personally, I would use the supervisor as a last resort. The investigation may uncover supervisor directions that contributed to the accident. How likely is the supervisor to include that information in the final report?

### **The Accident Scene**

When the accident occurs, our first concern needs to be the safety of the employee. We need to make sure the employee is taken care of before we start our fact finding. Once the injured are secured, we can start our investigation.

The first step in our investigation is to gather witness statements. When individuals are writing their statement, we want to ask them to stick to the facts and avoid opinions.

We also need to get the injured employee's statement. If the employee was transported to the hospital, you want to get the statement as soon as possible.

Why is it important to get the statements quickly? Facts change (in our mind) as time passes.

In addition to written statements, we also want to sketch the accident area with accurate location(s) of equipment, the injured employee(s) and any items that may have contributed to the accident (water/ other liquid on the floor, curled up carpet or mat, boxes on the floor, poor lighting, awkward ergonomic set up, items that were being lifted, etc.).

The last thing we want to do at the accident scene is take pictures; a lot of them. The pictures are going to supplement our sketch. Start by taking a wide shot of the entire accident scene and then walk towards the location where the employee was injured. While walking, take a picture every few steps. You then want to repeat that process from at least two different angles. You will also want to take pictures of any contributing items that you noted in your sketch.

### **Further Fact Finding**

After we finish processing the accident scene, we will want to gather more information to help us determine what caused the accident. The information needed in this process includes:

- Training history – When was the injured employee’s last training on the job process being performed at the time of the accident? Was the training the latest version on the topic?
- Job Hazard Analysis (JHA) – If you do not know what this is, you are not alone.....trust me! However, you will want to familiarize yourself with it. A JHA takes a work task and breaks down the steps from start to finish. Within each step, the proper and safe way to perform it is explained. Safety precautions and personal protective equipment (PPE) needed are also identified for each step.
- Facility Safety Audits – First question, are safety audits being conducted for the facility? The next question, were hazards noted that could be related to the accident? If so, were the hazard(s) recently noted and addressed?

### **Interviews**

Our approach to the interview process is very important. We do not want the interviews to feel like interrogations. Any employee may immediately get defensive if the wrong atmosphere is created. First, explain to the employee/witness that we do not want to appoint blame. We want to find the root cause(s) of the accident in order to prevent similar future accidents. We also do not want the interviews to feel rushed so be sure to set aside enough time to complete this process.

Next, have the injured employee/witness tell their version of the sequence of events that lead to the accident. Do not interrupt them, do not take notes, and above all else do not make facial expressions of disbelief. Listen intently and make mental notes of certain points of their recollection that you want to ask questions about.

When the injured employee/witness is finished, have them tell the story again. This time you will want to write down notes and ask questions when clarification is needed.

Once all of the interviews are finished, the time will come to compile all of the information together. Look for commonalities in the interviews and statements. Contributing factors, surface causes and root causes, will begin to come into view.

### **Root Cause Analysis**

The next step in the process is Root Cause Analysis. In this step we are looking to identify the main reason, or reasons, the accident happened. We have to be careful in this step because we do not want to mistake surface causes for root causes. Surface causes are just how they sound. It is what we see. It is a cause that contributed to the accident but there are underlying reasons the

surface cause happened in the first place. For example, let's say an employee slips and falls while in the breakroom.

How we find root causes is a fairly simple process. The most common method is the 5 Why's. The key is to keep asking questions (hint: they do not always have to be why). Even if you think you have reached the root cause, check to see if you can still answer a question. Also, a question may lead to multiple answers. Follow them. This will most likely lead us to multiple root causes. The progression of the 5 Why's might look something like this:

- Why did the employee slip and fall?
  - There was a puddle of water coming from the ice machine.
- Why?
  - The drain pipe was clogged and had been overflowing.
  - Witnesses saw the puddle but could not find a mop to clean the mess
  - Witnesses did not know how to turn the water supply off.
- Why? (Answer 1)
  - Checking the drain pipe was not on the checklist for maintenance.
    - Why?
      - There had not been a clog to the pipe before so it was unexpected
- Why? (Answer 2)
  - The area had paper towels but a mop and/or warning sign were not readily available
    - Why?
      - No reason to have the equipment nearby
- Why? (Answer 3)
  - They could not locate the shut off valve
    - Why?
      - They did not see that the valve
        - Why?
          - It was in the inside bottom of the ice machine

Now that we have we have answered our questions. It appears that we have identified a few root causes.

- A visual inspection of the ice machine and drain pipe were not on the maintenance checklist
- Spill clean-up items were not readily available in the breakroom
- The water supply shut off for the ice machine was not easily accessible

### **Corrective Action Preventative Action (CAPA)**

With our root causes now identified the corrective or preventative actions to reduce or eliminate the hazards. Corrective action will come in the form of engineering controls, administrative controls or personal protective equipment.

Examples of CAPA are:

- Revision of policies and procedures
  - From our example
    - The addition of the ice machine to the maintenance weekly checklist

- Attaching a mop, warning sign and other clean up equipment to the wall
- Communication of safe practices
- Retraining or revision of training material
- Equipment redesign to remove or reduce a hazard (engineering control)
  - From our example
    - Adding to the water line of the ice machine with an easily accessible shut off valve

The last step in the CAPA process will involve identifying who the corrective action will be assigned to. That individual will be responsible with completing the corrective action and reporting back to the appropriate safety officer. Set a timeline to follow up with the CAPA and track to ensure that the correct CAPA was implemented. If the hazard still exists, we will need to circle back to our root cause analysis and see if anything was missed. From there, we will need to decide on a new CAPA to address the hazard exposure.

### **The Accident Investigation Report**

The final stage of the accident investigation involves writing the report and submitting to management. We will want to include the following items in the report:

- Facts of the accident and investigation
  - Where the injury occurred
  - How the injury occurred
  - Time of day the injury occurred
  - How many witnesses
- Identify the surface and root causes of the accident
- State the CAPA implemented to address the root cause(s)
  - Identify the person(s) responsible for implementing the CAPA
  - Show a timeline for CAPA completion and follow up for effectiveness

Employee safety falls on the shoulders of everyone in an organization. Accidents will happen; however, how we respond to accidents will develop the safety culture. If we do nothing, it sets the tone that employee safety is not important and that mind set will trickle throughout. Investigating accidents not only helps us prevent future similar accidents, it also helps us create a safety culture that employees will embrace and help thrive.

Support materials, forms and trainings are available to all of our Fund members and can be provided by the Loss Control staff. Please contact us if you would like more information or the material we have available.