

# ECTA Workshop

Incident investigation and near-miss reporting in the chemical supply chain

## 1 Guideline incident investigation

The guidelines for investigation of logistics incidents and identifying root causes was published in July 2015 by ECTA, CEFIC and FECC. The guideline was created to provide guidance on how to carry out an incident investigation, to identify the root causes and the corrective actions to prevent reoccurrence. This guideline is aimed for all parties in the supply chain: chemical manufacturers, transport companies, distributors, storage companies, tank cleaning stations, etc.

Because the guidelines are recently published, ECTA has organized a workshop about these guidelines to inform their members of how to use the guideline and a database which is linked to it. This article gives you an overview of this workshop so you get motivated to use this guideline!

## 2 How to use the guidelines

Maayke van Noort from DOW Chemical Benelux started the workshop with a presentation of the structure and the use of the guideline. The guideline consists out of 4 main parts: a short description of the structure of an incident investigation in general, the incident investigation process ( an overview of the different steps of the guideline), the root cause analysis method for logistic operations and the corrective actions. In this overview, Maayke said that incident investigation is a general method for all industries but the Root Cause Analysis (RCA) of the guideline is very specific for the logistic sector. The RCA is designed to help the companies to find the root causes on organizational level. The creators of this guideline are convinced that an organization always has to look at themselves. The first step of the investigation is to create an investigation team. This team consists of a team leader and team members. The team leader and the team members should be close to the incident but not have any responsibility.

The attendees of the workshop were wondering how a small logistic company can create such a team because there are mostly two parties who have other interests (an LSP and a chemical company for example) and that the choice of the team leader is not very easy. Maayke responded that the choice of the team leader should be the result of consultation between all involved parties. It's also dependent of the kind of incident and which party controls the direct cause of the incident. Mostly the company who controls this cause has to deliver the team leader.

The second step in the investigation is to describe the incident. Hereby the investigation team as to reflect on following questions: when, where, what happened and who was involved. Also the affected elements (the involved products, type of containment, type of failure, etc.) and the consequences (personal injury, loss of product, environmental damage, etc.).

The third step consists of gathering evidence and facts which can be achieved interviewing people, taking pictures, screening of CCTV and on board camera recording and above all to no search for guilty ones.

The attendees remarked that sometimes there aren't any possibilities to make pictures or to have directly access to the incident site. Maayke said that companies who are in

this situation must rely on the other party that all information will be opened to all parties concerned.

The fourth step is the actual root cause analysis in which the guideline differs from other methods. The RCA starts with choosing the 'the type of event' in a list that can be found in the guideline on page 14. After one or more types of events are chosen (based on the previous steps) the team has to build an event tree to decide which events are the basic causes. The basic causes are the starting points to search the root causes. When the basic events are chosen, the team must investigate every event with a predefined list of immediate causes that also can be found in the guideline. When these choices are made, the actual search for root causes can begin. Therefore the guideline provides a predefined list of organizational and human root causes. This list helps the investigation team to search mainly organizational root causes so the management can easily intervene so the incident never happens again.

This raised some questions in the public. Someone made the remark that operators for example mostly search for guilty ones and damage, this makes the RCA very complicated. How can this be avoided? Maayke recognizes that this is a very difficult issue because it's very tempting to search for guilty ones. Therefore Maayke suggest to be very clear in the beginning of the investigation to search for root causes and not for guilty ones. The team must be very alert.

After the root causes are defined the guideline provides also a list with corrective actions that are also focused on the organizational level.

Finally, the information gathered from the predefined lists must be summarized in a fault tree in the last step of the investigation. The guideline also gives some information about reporting the results.

### **3 Accidents caused by distraction**

In the second presentation of the workshop, Guido Sluijsmans from SD Insights gave an overview of a new technology to prevent or react on distraction by truck drivers. Distraction is one of the main causes of incidents. The technology of SD insight consists of 2 sensors that are integrated in the truck. They give information to the employer and truck driver about possible distractions and also which actions they can make to prevent this. The technology is in a test phase and therefore SD Insights searches companies who want to test this.

The goals of the new technology is to reduce accidents with 20 to 50%, reduction of fuel consumption, reduction on maintenance, etc.

The attendees of the workshop asked if the system also automatic controls the brake in emergencies and how reliable this technology is. Guido answered that automatic brakes is not integrated at the moment but is one of the goals on long term basis reliability will be proven by testing it.

### **4 ISO 9001: 2015 and the guideline**

Companies that are ISO 9001 certified know the procedure of an ISO 9001 screening. An auditor from Certification Institute comes to your company and you have to prove that your company is operating according to the standard. There are a lot of ISO standards who all have

the same structure but the one standard is focused on safety and the other on quality. The essence of compliance management with the standards is to understand the structure and search in your company to procedures and systems that are an answer to the ISO standards. This is for some companies a new way of thinking because they focus more on creating new procedures to be compliant while they already are compliant.

Companies also have to find duplications in ISO standards, for example the risk analysis that can be found in the ISO 9001 and ISO 14001.

Search for methods of risk analysis in your company and apply it on the theme of the standard.

## **5 Major logistic incidents**

Major incidents unfortunately occur in the logistic sector. Therefore it is important for companies that they can deal with these situations. Beside the investigation of the accident (where the guideline comes to help) it's also important to protect your reputation. Stephen Rowland of Suttons Group showed the attendees that with a major accident transport companies have to (physically) hide their logo's on a truck that is involved in major accidents. Stephen also showed some investigations which were executed according to the guideline. He showed us that the visualization of the fault tree on the end of the investigation method is very crucial to have a good overview. He also underlined the importance of corrective actions. When an investigation team has a presumption of a cause, the companies can inform their employees through flash messages. If their assumptions at the end of the investigations are proven wrong, the flash message serves as a reminder.

## **6 Incident database of CEFIC**

In parallel with the guideline comes a database where users of SQAS can share their incident investigation reports (that are executed with the guideline) with other members. The sharing of these investigation reports is completely anonymous said Victor Trapani of CEFIC. Members can learn from each other by consulting the database. Therefore Victor underlined the importance of sharing, how more members share their experiences how faster the learning of incidents will be realized, a win-win situation!

For the members that use the database already there is also news. The database has gone through some major changes. The layout has been changed completely and beside SQAS users can also none SQAS users have access to the database. There are also more categories to have a better overview of different types of incidents.

## **7 Near miss reporting**

The importance of near miss reporting is common knowledge but not easy to accomplish. Marc Twisk from ECTA recognized that it is easy to report the number of incidents but not the number of near misses. To make this easier Marc presented a free tool for ECTA members that is called 'Easy to inspect'. ECTA gives his members the opportunity to use the tool for free for 6 months. The tool helps the companies to report near misses on a fast and easy way so the company doesn't lose a lot of time with reporting. ECTA wants that their members report near misses so they can upload (anonymous) near miss reports on a database so members can learn from each other.

<p>The attendees of the workshop said that there are many definitions of near misses. This can vary from non conformities to near accidents, it's not clear which definition</p>
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they have to use. Marc said that there are indeed a lot of definitions and ECAT will do some research for a good definition which can be chaired to the members of ECTA

## 8 Break-out sessions

The concluding part of the workshop was the application of the guideline. The attendees were separated in 2 groups and each group had to investigate the same incident. The complete RCA that was discussed in the first part of this review was executed and the results were satisfying. Both the team got very similar root causes which indicates the guideline works fine. The interesting part of this investigation was that the attendees are experts in applying RCA so a lot of different views came together and the attendees could learn from each other. This was one of the goals of the workshop and by extension ECTA: to underline the importance of collaboration between the members of ECTA, CEFIC and FECC.

The attendees of the break-out session didn't find every root cause on the predefined lists of the guideline. Because every root cause is important the attendees created some new root causes. The goal of the guideline is to find every root cause and not only the ones that are mentioned on the predefined lists.

## 9 Conclusion

The workshop let the attendees become acquainted with the guidelines for investigation of logistics incidents and identifying root causes. The structure and use were explained and some examples of major incident investigation were given. This showed that the guideline can be used for the investigation of near misses to major logistic incidents. Also the use and goal of the corresponding database was explained so the attendees were motivated to use it.

At the end of the workshop, the attendees could apply the guideline (in group) on an example, this formed the end of the workshop.

We hope this resume has motivated you to use the guideline and the corresponding database! You can find more information at <https://www.ecta.com/Best-Practices-Guidelines> .