Learning from incidents

Working Together for Safety Recommendation 043E/2019

SfS
Samarbeid for Sikkerhet

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1.0 Introduction

In November 2016, the Norwegian Ministry of Labour and Social Affairs invited affected parties and authorities to a working group to undertake a common assessment and discussion of the state and development of HSE within the Norwegian petroleum industry. This working group submitted its report, entitled 'Health, safety and the working environment in the petroleum industry'[1], in the autumn of 2017. In the report, there is agreement that 'learning from incidents and accidents is an extremely important contribution to the aim of continual improvement'.

The ministry's report also states that there is a need for improved systematisation of knowledge in order to ensure effective learning following incidents, and it is recommended that "an assessment of the parties' learning from incidents be carried out, with the aim of further improving this." As a result, the Safety Forum established two sub-groups, which submitted the report 'Learning from incidents'[2] to the forum on 29 March 2019. In addition, SfS has prepared this recommendation aimed at the individual organisations, but the recommendation has been prepared in parallel with the report to the Safety Forum and must be viewed in connection with it.

Recommendation 043E/2019 has been developed by a SfS workgroup with members from Norwegian oil and gas (Equinor and ConocoPhillips), Ptil, Safe, IndustriEnergi and KIS (Beerenberg).

2.0 Purpose

The purpose of this recommended practice is to contribute to improved experience transfer and learning following incidents, so that knowledge can help to ensure change and the continual improvement of HSE within the petroleum industry.

3.0 Prerequisites for success

Management commitment and clear expectations are crucial to the successful transfer of experience following incidents. Management must facilitate a positive reporting culture that can help to ensure the identification of undesirable incidents, and provide a basis for effective learning.

It is also a prerequisite that management communicates the importance of learning from incidents, and ensures that time and resources are set aside for high-quality transfers of experience. In order to achieve this, sufficient investigatory competence must form the basis for the learning.

Management must also demonstrate their desire to lead a learning organisation. This involves establishing a strategy for how the transfer of experience / learning from incidents shall be ensured. See also the continuous improvement cycle in Chapter 7.

4.0 Target group

The target group for this recommendation includes individuals who are responsible for learning within the organisation, as well as HSE personnel and managers.

5.0 Definitions

Learning: Learning is usually defined as a relatively permanent change in perception and behaviour as a result of previous experience.

Organisational learning has traditionally been defined in two ways: 1) As a process through which organisations and their subsidiary units change as a result of experience, and 2) As a change in organisational knowledge. Common to most definitions of learning is that they are in some sense about changes in practice and behaviour[2].

6.0 Recommended practice for effective learning within the organisations

Most organisations have systems to follow-up and learn from certain incidents, such as the follow-up of measures after investigations (Synergi, Quest, Intelex etc.), and for sharing information about these incidents via various 'one-pager' solutions, such as Lesson Learned (LL), SIOP (Safety Intervention One Pager), PowerPoint presentations, etc.

Most organisations also participate in several networks and forums that cover the transfer of experience. These are good arenas for learning – especially for smaller organisations that would otherwise have relatively few incidents to learn from. In order to achieve the most relevant learning possible, it is important that all organisations participate in and contribute to the transfer of experience – more information about this can be found in the previously mentioned report to the Safety Forum[2].

6.1 Routines for learning

In order to achieve the best possible foundation for learning for both the organisation and individuals, it is necessary to have access to a suitable and user-friendly system that contains learning from previous incidents. The following is therefore recommended:

a. Establish routines to learn from external incidents in the same way as for internal incidents.
b. Ensure that this learning is made available to everyone within the organisation.

Those who plan and/or perform the work must be given the opportunity to search for incidents and find learning points relevant to the work to be carried out. A high level of user-friendliness

and good search options are therefore extremely important. Learning that is relevant and available when needed will have a greater impact than general learning.

6.2 Roles and responsibilities

In order to maintain an effective and efficient learning system, roles and responsibilities must be clarified. The following is therefore recommended:

a. Define who is responsible for entering external and internal learning in the internal system for experience transfer and learning.
b. Set requirements regarding the use of experience data / learning; define who is responsible and what shall be done (some organisations set requirements regarding the transfer of experience in connection with SJA meetings).

6.3 Establishment of measures

In order to prevent similar incidents from happening again, measures should preferably target the underlying causes identified in the investigation reports. The following recommendations regarding the establishment of measures apply:

a. Involve relevant personnel to find effective, implementable measures. Executing personnel should be involved in any changes to work processes, etc. that directly affect them.
b. Consider the use of ‘learning teams’ or ‘casual learning’ within the investigation process itself.
c. Ensure that measures are designed so that they can be followed up and evaluated, e.g. in accordance with the ‘SMART’ principle (specific, measurable, acceptable, realistic and time-related).
d. Ensure that relevant personnel are made familiar with the measures and associated changes, such as any updated procedures and governing documentation.
e. Ensure that the measures are followed up and the changes evaluated (see also Chapter 7). Ask the following control questions: Were the measures the right type? Does anything else need to be done? Has a change occurred? Have the measures had the desired effect? Do we need to make any corrections? Several studies have shown that the industry has significant potential for improvement in this area[2].

6.4 Dissemination of learning

In addition to concrete measures, learning from incidents should be disseminated to the relevant target groups. The purpose of this is to raise awareness among personnel of what can go wrong, as well as what individuals can do to avoid similar incidents. The following steps are recommended:

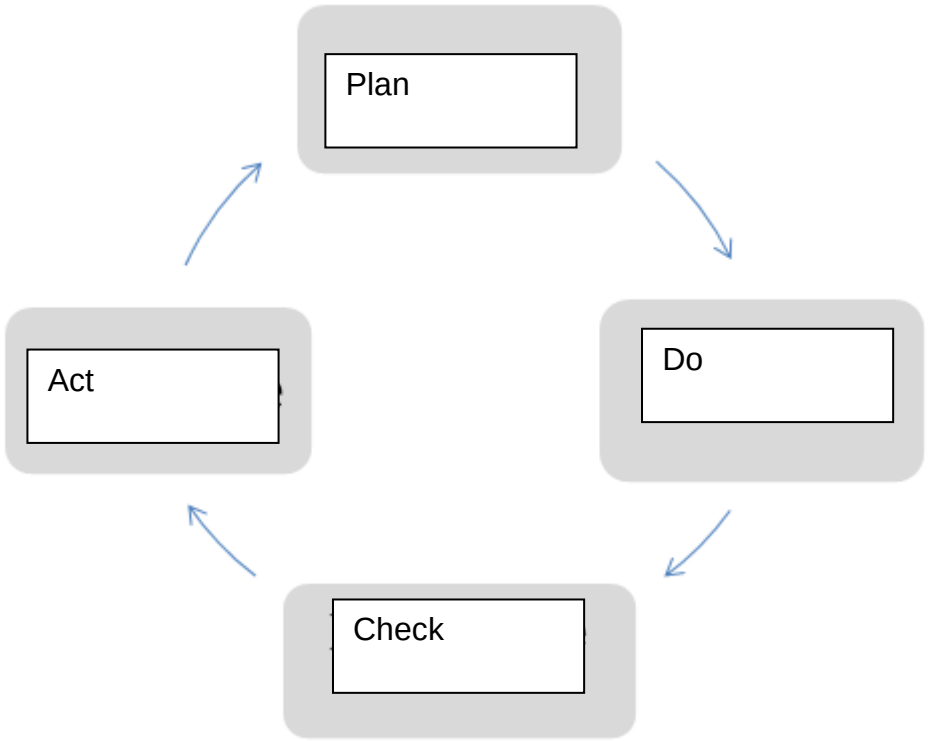
a) Identify the target group and focus on the relevant and serious incidents for that group.
b) Focus on learning points – avoid focusing on personal mistakes. In order to achieve the best possible effect discussions should be facilitated, so that individuals have the chance

to consider the learning points in relation to their own work. Good discussions and reflections provide improved insight and a better foundation for learning and re-telling.

c) Consider the use of various pedagogical tools (films, animations, presentations, witnesses, discussions, etc.). In addition to films produced by the organisation, there are other sources from which experience can be obtained, such as the safety films from OSHA[3] and Working Together for Safety[4].

7.0 Use of the Continuous Improvement Cycle

Recommended practice for the Continuous Improvement Cycle steps:
Also known as the Performance Management cycle - learning as a part of work execution



7.1 Planning

When planning the work, the identification of risks and learning from previous incidents may have a significant risk-reducing effect. Experience transfer and learning points should be a natural part of the process when preparing work packages. This will provide improved opportunities for identifying and implementing risk-reducing measures before the work starts.

In addition to the planning of individual jobs, all learning that contributes to the improvement of work processes and procedures will also have a significant impact on planning. An important prerequisite is having a system that contributes to the effective implementation of changes, and ensures that personnel become familiar with and understand these.

7.2 Execution

Following the previous steps will provide you with a good foundation for completing the work safely. It will also be relevant to see whether there is any transferred experience or local learning that affects this phase. If experience and learning points have resulted in any changes to work processes and descriptions, these must be included prior to the job discussion or safe job analysis. It must be ensured that everyone on the team is aware of and understands the implemented changes and learning points.

In the event of work for which job packages have not been prepared, the team is recommended to actively obtain experience and learning from the available systems, e.g. Synergi, the Portal for experience transfer and lessons learned, etc. It is also important that the work team share their own experiences and discuss what has previously worked well or poorly.

7.3 Control – Follow-up

Control and follow-up will be able to be undertaken both in relation to the consideration of learning points in the preparation of job packages, and when performing the work itself. The purpose is to check adherence to the implemented measures/changes, and to ensure that these function as intended. Have the learning elements been included in the planning of the job, and are there signs of learning? Has learning contributed to the work being carried out in a new and improved way?

Control points may include KPIs on job packages, assessment of the content of pre-job meetings, the extent to which transfer of experience / learning points are reflected in the work permit, and to what extent previous experience / lessons learned are shared and used.

Upon completion of the work, the work team may undertake an assessment of whether the planning and execution were in line with the desired result.

7.4 Corrective actions

If there are no signs of learning following implemented measures / learning points, you should stop and reassess the planning of the work.

If no nonconformities or improvement measures have been identified through verifications or control measures and KPIs, no new measures will be implemented, nor corrections made to established procedures.

If nonconformities or points for improvement result in a need for changes, these must be carried out in accordance with the individual organisation’s established practice. In such cases, what has been identified and the desired effects of any new measures or changed methodology must be made clear.

8.0 References

1. ‘Health, safety and the working environment in the petroleum industry (Helse, arbeidsmiljø og sikkerhet i petroleumsindustrien)’, Ministry of Labour and Social Affairs 29.09.2017
2. ‘Learning from incidents (Læring etter hendelser)’, report to the Safety Forum from the multi-party committee appointed by the Safety Forum. Dated 29.03.2019.
3. OSHA’s safety films can be found here: https://www.osha.gov/video/
4. Working Together for Safety’s safety films can be found here: http://www.samarbeidforsikkerhet.no/modules/m02/article.aspx?CatId=139&ArtId=193