



Number 11
2021

MAHB Major Accident Hazards Bureau
Technology Innovation in Security Unit

seveso
common

INSPECTION

series
criteria

Training of Personnel

The Common Inspection Criteria publications of the Seveso Inspection Series are intended to share knowledge about technical and organisational measures and enforcement practices related to major hazard control and implementation of the Seveso Directive. The criteria were developed by Seveso inspectors to aid the dissemination of good enforcement and risk management practices for the control of major industrial hazards in Europe and elsewhere. These criteria are intended for the use of hazardous site inspectors but also could be beneficial for industrial site operators. The document highlights a number of issues that are critical for the training of personnel internal to a hazardous site. It is not intended to serve as a technical standard nor as a summary or replacement of any existing standards on the matter.

DEFINITION AND SCOPE

Within the context of this bulletin ‘training’ refers to all organised activities to increase knowledge and skills needed to perform a given task or function. It includes all possible training activities, such as class room training, training on the job, e-learning, self-study, traineeship, coaching, etc.

This publication covers the training of internal personnel involved in the operation and maintenance of the installation. Contractors are out of the scope of this document. Contractor management is a well-defined management item in itself.

Managers and engineers are also outside the scope of this document. This exclusion does not imply in any way that this category of employee does not require training nor that inspectors should not address the knowledge and skills of managers and engineers during inspections. Their training needs are, however, likely to be much more variable and less prone to be the subject of general inspection criteria such as described in this document.

Operational personnel includes control room operators as well as field operators. Maintenance personnel refers to employees performing maintenance and inspection as well as modification activities.



Figure 1. Training of personnel is an important part of the safety management system

INITIAL TRAINING PROGRAMME

Initial training is the training to be followed by a person that is newly assigned to a specific function. It can be a newly hired employee or an employee transferred to a different function. For each operational and maintenance function the necessary knowledge and skills should be determined as well as the training needed to acquire this knowledge and these skills. In other words, for each function there should be an initial training programme. There should be a clear link

between the tasks to be performed as part of the function on the one hand and the knowledge, skills and training on the other hand.

Training of operational personnel typically includes the following safety related topics:

- The process risks of the installation and the safeguards to control them, and in particular
 - the critical alarms and how to respond to them
 - personal protective equipment if needed for performing operational tasks in the field
- Instructive incidents and accidents
- The hazardous substances present in the installation
- The permit-to-work system, especially if issuing Permit-to-Work (PTW) forms is part of the job
- The emergency plan
- General safety procedures within the company

Training of maintenance personnel typically includes instruction on:

- The safe execution of maintenance and assembly jobs (welding, cutting, working on electrical installations, etc.)
- Safe working in confined spaces (if applicable)
- Instructive incidents and accidents
- Personal protective equipment needed on the job
- The hazardous substances present in the installation
- The permit-to-work system
- The emergency plan
- General safety procedures within the company

A good and common practice is to allow the trainee to gain practical experience and to learn on the job by performing certain tasks under supervision or assisting experienced fellow workers. In this period, a coach or personal is often assigned to the trainee. The coach should have extensive knowledge and experience with the job the trainee is being trained for.

The following elements are also considered good practice:

- The mechanism for verifying whether the training resulted in the acquisition of the necessary skills and knowledge is specified for each training module (e.g., by formal tests, by observation of tasks, by judgement of the training coach, etc.).

- For each initial training programme, there is a person assigned as responsible for keeping the programme up to date.
- Within each operational and maintenance department, it is clear (to the management and staff involved) who is responsible for making sure a new recruit follows and completes the initial training programme.
- Completion of the initial training programme should be documented.
- The decision that a recruit can perform a task by himself (without supervision) is formally documented. In most cases, the number of tasks for which a recruit is considered to be trained, will increase gradually over time. Therefore, it is strongly advised to document the completion of this component of the training programme. Documentation of completion of interim objectives also provides evidence of progress made during the initial training programme at any given point in time.

PERIODIC REFRESHER TRAINING

The operator should identify the training modules that need to be followed periodically by the internal personnel.

Periodic refresher training is typically implemented for the following types of tasks:

- Tasks that are seldom performed or that are performed in exceptional circumstances, for example, a specific action to be taken in response to a safety critical alarm
- Tasks that are critical to safety, and where there is a risk that the strict adherence to established procedures will decline over time
- Critical knowledge, for example, properties of the hazardous substance involved in the process
- A system in place that makes sure the necessary refresher trainings are given in a time before the “expiration date” of the previous training session has been exceeded

AD HOC TRAINING

Ad hoc training is given in response to a specific training need. These training needs can surface for various reasons:

- An incident or accident, or a series of them, revealing a systemic gap in certain types of knowledge or skills within the specific workplace, the corporation, or the industry at large
- Observations or audits
- A modification to the process or the installation

A common practice for companies is to provide a block of time for training at regular intervals and select the topic to be trained in function of the current needs. For example, many companies have a system of weekly or monthly tool box meetings that can be used for giving training.

There should be a system to identify and collect the ad hoc training needs within the company. It should

be clear who is responsible for the managing the ad hoc training (content, planning, etc.).

The company should have a policy on how to deal with absences during ad hoc training sessions, in order to deal with the situation that an employee repeatedly fails to attend a certain training session.

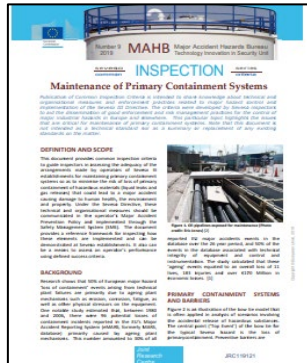
REGISTRATION

All training should be registered. The registration should provide an overview of the training received for any given employee. This documentation implies that training is not only registered for each training session conducted (as a list of attendees) but also for each employee (resulting in a list of the training modules followed).

Other publications in the Common Inspection Criteria Series



Natech Risk Management



Pressure Relief Systems



Process Safety Performance Monitoring



Maintenance of Primary Containment Systems

All MAHB publications can be found at <https://minerva.jrc.ec.europa.eu/en/shorturl/minerva/publications>

Contact

European Commission Joint Research Centre
 Directorate E - Space, Security and Migration
 Technology Innovation in Security Unit
 via E. Fermi, 2749 21027 Ispra (VA) Italy
 Email: info@MINERVA-Info@ec.europa.eu

About the bulletin

This bulletin is a product of the EU Technical Working Group on Seveso Inspections led by the Major Accident Hazards Bureau of the European Commission's Joint Research Centre. For more information related to this bulletin and other similar products, visit <https://minerva.jrc.ec.europa.eu>