Safety report requirements have continued to evolve since the COMAH regulations were first issued in 1999.

Since that time, ABB has supported operating companies in developing safety reports that reflect these developing requirements.

The COMAH Regulations 2015 and the Competent Authority (CA) have introduced greater focus on the following topics:

**Review of process safety incidents**
This is a more formal demonstration that the operating company is continuing to monitor for process safety incidents on similar installations elsewhere, and that the learning from these incidents is being incorporated into the selection of the representative set of incidents for the COMAH safety report.

**The representative set of major accident hazards**
There is an increasing requirement to provide a clear link between all the accident scenarios identified in the HAZOP or Process Hazard Review (PHR) study and the selection of the representative set of major accident hazards. This should include a demonstration that all potential accident scenarios are covered by the representative set.

**Demonstration of ALARP**
In order to respond to the increasing requirement for robust demonstration that risks have been reduced as low as reasonably practicable, identification of potential risk reduction options should be incorporated in the HAZOP / PHR. Calculations of individual risk and societal risk should be used in order to carry out cost benefit analyses of risk reduction options.

**Technical aspects**
There is a greater focus on the specific topics covered under technical aspects, i.e. human factors; Electrical, Control & Instrumentation (EC&I); mechanical engineering and process safety. This requires more involvement of Subject Matter Experts (SMEs) in the specific topic areas. SMEs provide valuable input to improve the content of the technical aspects of the safety report, against the requirements of the Safety Report Assessment Manual (SRAM).
Tolerability criteria for Major Accidents to the Environment (MATTE)

There is a requirement to apply the Chemical and Downstream Oil Industries Forum (CDOIF) guidance. This requires an assessment of the aggregated risk to a receptor from all the potential sources on an establishment. If there are several potential sources that can impact a specific receptor, this can result in a requirement for a higher level of protection on each potential source.

Human factors

There needs to be an increased formality in demonstrating that the operating company is managing human factors in relation to the prevention and mitigation of major accident hazards. This is based on the Competent Authority’s (HSE) “human factors roadmap”. This states expectations for the identification of safety critical tasks and the associated task analysis and design of procedures to good human factors principles. It also requires comment by the operating company on human factors in projects, training and competence, communications, fatigue / shiftwork, and human factors engineering. This is against a background of operating companies being required to develop their own appropriate level of competence in human factors.

Use of bowtie diagrams

Communication and education of the workforce in the potential major accident hazards of the establishment is required. This can be done through a variety of media, but there is increasing support for the use of bowtie diagrams as a pictorial representation of the causes, safeguards, and consequences of potential incidents.

What we offer

ABB offers support with all aspects of COMAH safety reports ranging from preparation of a complete safety report for new upper tier establishments through to updating selected aspects of the safety report, to meet changes in the establishment, new requirements or specific areas of improvements as requested on an establishment basis by the (CA). ABB COMAH support services are tailored to the specific requirements of each establishment.

Benefits

- A robust COMAH project management tools allow COMAH safety report preparation to be delivered using project management discipline to ensure effective resourcing plans can be developed and budget constraints met
- COMAH gap analysis tool allows clear identification of areas of the safety report requiring attention
- Process safety specialists provide pragmatic and achievable recommendations as part of safety report improvement programmes aimed specifically at reducing the risk of major accident hazards
- In-house SMEs who can provide valuable input to improve the content of the technical aspects of the safety report through a detailed review against the requirements of the SRAM
- Provides MATTE risk assessments including both the descriptive and predictive elements. ABB’s methodology follows the recent guidance from CDOIF

Why ABB?

ABB is able to offer expert coverage in all aspects of COMAH through its extensive in-house process safety expertise and technical engineering capability.

Our process safety specialists share best practice gained from supporting COMAH operators across the process industries and exploit this best practice. They have extensive experience in COMAH hot topic areas, e.g. ageing plant and associated mechanical integrity challenges, human factors, competency assurance, etc.

We can provide the full spectrum of COMAH support services ranging from specific expertise for particular safety report sections through to working with client organisations as a partnership to develop complete safety reports.

Our process safety consultants have a clear understanding of COMAH regulatory requirements and associated guidance with regular interaction with the CA on behalf of companies.