

# THE SEVESO II DIRECTIVE AND DANISH ACTIVITIES SUPPORTING ITS APPLICATION IN SOME EASTERN EUROPEAN COUNTRIES

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## INTRODUCTION

The Council of the European Communities adopted the first so-called Seveso Directive, Directive 82/501/EEC in 1982. This Directive aimed at controlling major-accident hazards of industrial activities in the member states of the European Community, following the serious accidents at Flixborough, United Kingdom in 1974 (an hydrocarbon explosion in an refinery) and at Seveso, Italy in 1976 (release of dioxin following a runaway reaction in a chemical plant). This Directive was replaced by Directive 96/82/EC [1], called the Seveso II-Directive, on the control of major accident hazards, and adopted by the Council of the European Union in 1996.

The aim of the Seveso Directives is the prevention of major accidents involving dangerous substances and limitation of the consequences of such accidents, however limited to establishments having dangerous substances in excess of fixed threshold quantities. The Seveso II Directive is a legislative document that all the members of the EU must fulfil through implementation of national legislation

The Directive in addition to the European Union is also adopted by Norway, Iceland and Switzerland and countries intending to join the EU in addition as a condition have to introduce Legislation fulfilling the Directive.

At present, following the changes of the political scene in Europe and growing concern of the public about prevention of the consequences of major accidents, not least transboundary accidents such as the resent Baia Mare accident (Rumania) has lead to a proposals on broadening the scope of the Directive and the UNECE Convention on the Transboundary Effects of Industrial Accidents. The Seveso II Directive is based on the experiences accumulated during the implementation of Seveso I, in particular lessons learnt from accidents, which have occurred within the European Union since the adoption of Seveso I. The main changes are:

- The scope of Seveso II has been broadened and simplified, referring to the presence of dangerous substances at establishments in excess of threshold quantities, while Seveso I referred either to substances in connection with certain industrial activities or to separate storage of substances.
- The measures to be taken by the Operators of the Establishments to prevent and limit the consequences of major-accidents have been redefined and now include the setting up of a "Major-Accident Prevention Policy". The intention is to emphasise the commitment of the Operators of Establishments and the setting up of safety management systems as important elements to promote high levels of protection throughout the Community in an effective and consistent manner.
- Increased emphasis on measures to minimise environmental impacts of major-accidents including emergency preparedness and land-use planning, identification of possible domino effects, information to the public and where relevant to neighbouring countries (UNECE Convention on the Transboundary Effects of Industrial Accidents).
- To obtain uniform levels of protection throughout the European Union, the Member States are required to ensure that the Competent Authorities assess the Safety Reports and in particular are required to organise a system of ongoing inspections.
- Based on the Rome Treaty, the purpose of the Directive is the prevention of major accidents and to harmonise the efforts in this field within the EU to avoid that disparity in measures to prevent major accidents should affect the functioning of the common market.

- Seveso II is related to the new EU legislation on the protection of safety and health of workers, the Directive 89/391/EEC [2] in particular, which have come into force since Seveso I was adopted.

## **OBLIGATIONS ACCORDING TO THE SEVESO II DIRECTIVE**

Operators of establishments, where substances in excess of certain threshold quantities given in the Seveso II Directive are present, are required to produce a Safety Report, demonstrating that:

- A major accident prevention policy and a safety management system for implementing it are in effect.
- Major accident hazards have been identified and necessary measures have been taken to prevent such accidents and limit their consequences for man and the environment.
- Adequate safety and reliability have been incorporated into the design, construction, operation and maintenance linked to major accident hazards.
- Internal emergency plans have been drawn up and information has been supplied to the Authorities enabling an external emergency plan to be drawn up.

To fulfil these obligations the Operators shall adopt and implement procedures for systematic identification of major hazards arising from normal and abnormal operations and to assess their likelihood and severity. It is important to carry in mind, that hazard identification and risk assessment are more or less universally required in other EU Directives such as the Machinery Directive, the Framework Directive on worker protection and the Directive on equipment and protective systems intended for use in potentially explosive atmospheres. The requirements on risk assessment included in these Directives may be limited to the safety or safe use of machines, explosion prevention and protection, while the Seveso II Directive has a wider scope covering the protection of man and the environment as a whole. The outcome of risk assessments as required by these Directives may however be useful in support of the risk assessment to be carried out by the Operator to demonstrate the adequacy of the measures taken to prevent major accidents - not least to avoid duplication of work.

Risk assessment always includes a final judgement, by the Operators as well as the Authorities, whether the measures taken are adequate or additional measures have to be taken. This judgement may in most cases be based on technical and managerial expertise, supported by comparison with the results of quantitative or qualitative risk analysis, use of recognised Standards, Codes of Practices and lessons learnt from accidents. It is important to note that no commonly agreed acceptance criteria have been laid down in support of these judgements at Community level.

The Seveso II Directive emphasise the responsibility of the Operators to take all necessary measures to prevent major accidents and limit the consequences if such accidents should occur. The obligations to provide the persons working on the site with information, training and equipment in order to ensure their safety, which were included in Seveso I, are now covered through other Directives.

The Competent Authorities are obliged as a minimum to receive and assess the Safety Reports and communicate the conclusions of the examinations to the Operator. The examination of the Safety Reports and the conclusions drawn must be seen in context with the requirements for setting up an inspection system.

It is important to have in mind, that the role of the Authorities in the Member States may be increased significantly, when the Seveso II Directive is fully implemented. Hopefully this may lead to a constructive dialog with the Operators and the employees to achieve the aim of the Directive and not result in more or less useless bureaucracy.

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## ACTIVITIES BY THE EUROPEAN COMMISSION TO SUPPORT THE IMPLEMENTATION OF THE SEVESO DIRECTIVES

To support uniform implementation of the Directive the Commission organises periodic meetings of the Competent Authorities covering interpretation of the content of the directive and exchange of information on the implementation.

In addition the Major Accident Hazards Bureau (MAHB) has been established at the Joint Research Centre in Ispra Italy. One of the tasks of MAHB is to collect, classify and distribute relevant information on the prevention of major accidents such as lessons learnt from accidents, Safety Reports and Codes of Practice.

In addition, the Commission and the MAHB have developed guidance documents to support the implementation of Seveso II, comprising:

- *Guidance on the preparation of a Safety Report* [3]
- *Guidelines on a Major Accident Prevention Policy and Safety Management System* [4]
- *Explanations and Guidelines on harmonised criteria for dispensations* [5]
- *Guidance on Land-use Planning* [6]
- *General Guidance for the content of information to the public* [7]
- *Guidance on Inspections* [8]

## COURSES IN EASTERN EUROPE

The Danish Ministry of Labour in collaboration with the Danish Ministry of the Environment supports the adoption of Major Hazard Legislation in Eastern-European countries. In addition to other activities, it has funded projects to promote the use of hazard identification and risk assessment in connection with the implementation of Seveso II. These projects emphasise the promotion of the collaboration between the Competent Authorities, which is necessary due to the broad scope of the Directive.

As part of these projects, training courses were held for Polish, Czech, Slovak, and Estonian experts representing authorities, research institutes as well as the industry. These courses addressed the obligations of the Seveso-II Directive, the contents of the safety report, and a variety of risk analysis methods, from hazard identification to risk communication. Participants were actively involved in the course by analysing and discussing case studies. During all courses, there were vivid discussions about the national implementation (at different stages in the different countries) of the Directive, especially between authority and industry representatives.

## COACHING IN SELECTED EXERCISES

In Poland and Estonia, as part of these projects, Danish experts were/are involved in coaching the formulation of safety reports for two selected companies in Poland (concluded) and one in Estonia (ongoing). The coaching aims at transferring practical experience in the preparation of Safety Reports and the assessment by the Competent Authorities.

The selected companies provides a first draft of a risk analysis study and a safety report, which is discussed and improvements are suggested a first meeting between local staff and Danish experts. This leads to a final report, established by the company and an assessment report by the Competent Authorities.

The Safety Report and the assessment report are in turn presented and discussed at a Workshop, with representatives from other relevant companies and authorities.

Finally, following the workshop a Polish group of experts visited Denmark to gain information on Danish major hazard installations, in particular related to the introduction of additional safety measures adopted as a consequence of lessons learnt and technical developments since the Directive was adopted.

## CONCLUSION

In the atmosphere of growing mutual understanding of the necessity of preventing major industrial accidents in Europe including Russia, it is important to share experiences in providing safe process and procedures in handling hazardous substances and not least to establish networks for future exchange of information.

Major Hazard Legislation fulfilling the requirements of the Seveso II Directive are implemented in Eastern-European countries that wish to join the European Union and the necessary co-operation between the authorities has been initiated

The Seveso II Directive put obligations to industry, employees and authorities in order to control the risks related to the handling and storage of hazardous substances. It is required that the industry operators establish and implement a safety management policy, identify hazards at their plants, document that safety aspects are duly included in the design and operation of their plants and that emergency plans are in place.

The authorities are to verify that this has been done by assessment of safety reports and inspection, and to set up external emergency plans.

Danish experts have for several years supported the implementation of the Seveso II Directive in Eastern Europe through exchange of information and experience at meetings, courses, coaching and visits to Denmark. These activities have met a wish from these countries to transfer experience and practical methods necessary to live up to the requirements of Seveso II.

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