Seveso II directive

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A history of major accidents...

1974: Flixborough, United Kingdom
1976: Seveso, Italy
1976: Lapua cartridge factory, Finland
1984: Bhopal, India
1984: Mexico City
1986: Basel, Switzerland
1999: « Seveso II » to be implemented in the Member States of the European Union
A history of major accidents ...

2000: Baia Mare, Romania, Enschede, Netherlands
9/2001: Toulouse, France
2003: Seveso II amendment
Bunsefield explosion (http://www.buncefieldinvestigation.gov.uk/)
Oil refinery explosion in Texas
2012: Seveso III should be implemented
1.6.2015
Seveso-directives and guidelines


  Major accident hazard bureau (MAHB), Ispra, Italy
Seveso II - Aim

- **Prevention** of major accidents involving dangerous substances
- **Limitation of the consequences** of accidents on man and the environment

High level of protection for man and the environment throughout the European Union
Scope

**EU-CHINA**

- All establishments where dangerous substances are present in quantities ≥ thresholds in annex I

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<th>Lower</th>
<th>Upper</th>
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<tbody>
<tr>
<td><strong>very toxic</strong></td>
<td>200</td>
<td>500</td>
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<tr>
<td><strong>toxic</strong></td>
<td>500</td>
<td>2000</td>
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- Lower tier – upper tier
- List of named substances
The Directive does not cover:

• military establishments;
• hazards created by ionising radiation;
• the carriage of dangerous substances by road, rail, air and inland waterways;
• the carriage of dangerous substances in pipelines outside the establishments covered by the Directive;
• the exploitation of minerals, with the exception of chemical and thermal treatment operations and storage connected with such operations which lead to the presence of dangerous substances;
• mineral prospecting and offshore exploitation activities;
• waste landfill sites.
Control measures aimed at Prevention

Upper and lower tier:
- General obligations
- Notification
- Major Accident Prevention Policy
- Domino Effects
- Inspection by Competent Authorities

For upper tier only:
- Safety Report
- Safety Management System
Notification must contain the following details:

- the name of the operator and the address of the establishment;
- the registered place of business of the operator;
- the name or position of the person in charge of the establishment;
- information sufficient to identify the dangerous substances or category of substances involved;
- the quantity and physical form of the dangerous substance or substances involved;
- the activity or proposed activity of the installation or storage facility;
- the immediate environment of the establishment.
MAPP (major accident prevention policy)

Member States must ensure:

• that the operator draws up a document setting out his major-accident prevention policy;
• that the policy is properly implemented
Safety report

• the operator shall produce a safety report for the purposes of:
  – demonstrating that a major-accident prevention policy and a safety management system have been put into effect;
  – demonstrating that major-accident hazards have been identified and that the necessary measures have been taken to prevent such accidents and to limit their consequences;
  – demonstrating that adequate safety and reliability have been incorporated into the design, construction, operation and maintenance of any installation, storage facility, equipment and infrastructure
Safety report

• the operator to produce a safety report for the purposes of:
  – demonstrating that internal emergency plans have been drawn up;
  – supplying information to enable an external plan to be drawn up;
  – providing sufficient information to the competent authorities.
Safety report

• The safety report must contain certain specific information, including an updated inventory of the dangerous substances present in the establishment.

• The report must be reviewed:
  – at least every five years, or
  – at any other time at the initiative of the operator or the request of the competent authority, where justified by new facts, or
  – in the event of a site being modified.
Seveso-SMS requirements

Seven main requirements from Annex III:

1. Organization and personnel (...)
2. Identification and evaluation of major hazards
3. Operational control
4. Management of change
5. Planning for emergencies
6. Monitoring performance
7. Audit and review.

Point: all requirements to be fulfilled considering aspect of major accident hazards!
Domino effect

EU-CHINA

The competent authority must:

• identify establishments or groups of establishments where the risk or consequences of a major accident could be increased due to the location and the proximity of the establishments and their holdings of dangerous substances;

• ensure an exchange of information and cooperation between the establishments.
Control measures aimed at limitation of the consequences

**Upper and lower tier:**
- General obligations
- Land-Use Planning

**For upper tier only:**
- Emergency Planning
- Information to the Public
Emergency plans

• all operators obliged to submit a safety report also draw up an *internal emergency plan* and supply the competent authorities with the information necessary to draw up an *external emergency plan*. The emergency plans must be reviewed, tested and where necessary revised and updated at least every three years.
The competent authorities must organise a system of inspections so as to ensure:

• that the operator can demonstrate that he has provided appropriate means for preventing major accidents and limiting their consequences;
• that the safety report is accurate and complete;
• that information has been supplied to the public.

Prohibition of operations

• Member States must prohibit the use or bringing into use of any establishment, installation or storage facility where the measures taken by the operator for the prevention of accidents are inadequate
Provisions for Industrial chemical parks (ITC) in Seveso II/III

No definitions for “ICP” in Seveso II or III

Only article referring to potential problems due to close vicinity of “Seveso establishments” to each other in ICPs

Art 9 – Domino Effects:

- Cooperation through exchange of information concerning overall hazard of a major accident in their MAPPs, SMS, SR & IEPs
- Cooperate in info to public
- Supply info to CA responsible for EEPs.
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Seveso III

Main purpose – align scope to new international chemicals classification (CLP Regulation transposing GHS classification)

Clarify/improve

- Information to the public
- Inspections
- Public participation
- Access to justice

Main philosophy Seveso II remains
Seveso - objectives

Prevent major accidents
- Safety Management = operator
- Land use Planning - Inspections = competent authorities

- Limit consequences on human health and environment
- Emergency planning – Information to public = operator and civil protection services
Seveso III- land use planning


- What? MS to take into account Seveso principles in their LUP by controlling
  - Siting of new establishments
  - Modifications to existing establishments
  - New developments (transport routes, locations of public use, residential areas)