Update on Seveso III

At a glance

- Seveso III is an update to a European Union safety directive that is effective as of June 1, 2015 and affects mainly chemical and petrochemical businesses.
- The aim of Seveso III is to introduce consistent rules that help to prevent major on-shore accidents and enable organizations to measure the effect when they do occur.
- The inspection regime to ensure compliance is set to become more robust and effective.
- Businesses need to demonstrate compliance with Seveso III to mitigate risks. However, safety culture is not yet covered.
- However, the last 15 years have shown us that these accidents continue to occur even though investigations later show their nature could have been anticipated.

What the Seveso III directive seeks to achieve

The Seveso European Union (EU) directive was introduced in 1982 following a major chemical plant disaster in Seveso, Italy, in 1976. The second directive was introduced in 1996 and Seveso III is effective as of June 1, 2015. The directive addresses on-shore major accident hazards involving dangerous substances following a two-tier approach based on the present quantity of hazardous substances. Before the directive was introduced, many major incidents escalated and affected the outside environment. What was lacking were consistent and comparable rules to reduce the risk of incidents, and a way of measuring what happens when incidents occur. It was agreed that there was a common interest in trying to prevent accidents that could trigger large-scale incidents.

Seveso III will have an impact mainly on the chemical and petrochemical industries. The directive excludes nuclear, transport, military and pipelines. The directive’s objective is to help prevent major accidents and limit their consequences. The aim is to offer the same level of protection throughout Europe. Seveso III effects around 10,000 establishments in Europe.

History safety legislation

- Health and Safety at Work Act 1974
- UK Notification of Hazardous installations Regs 1982
- EU Major Accidents Hazards Directive 1982
- USA OSHA Process Safety Management Rules 1982
- EU Directive 2000
- EU Seveso II 1996
- EU Seveso II amendments 2005
- EU Seveso III Implementation 1st June 2015
- Atex
- EU Pressure Equipment Directive 2002
- EU Seveso III
- Atex
- EU Seveso III Implementation 1st June 2015
- Flixborough 1974
- Seveso 1976
- Bhopal 1984
- Basle 1986
- Enschede 2001
- Texas City 2005
- Buncefield 2006
Changed dangerous substances classification

Seveso III follows the changed classification of dangerous substances according to the Classification Labelling and Packaging (CLP) to align with the United Nation’s Globally Harmonised System of Classification and Labelling of Chemicals (GHS). This will involve the naming and the categories of dangerous substances and extending the list of named substances.

The categories of different types of hazards will be:

- physical – for example, fire and explosion risks
- health – for example, acute and chronic toxicity
- environmental – for example, aquatic environment and ozone risks
- other, including water reactives and some carcinogens.

The Toxicity categories for CLP do not match with the old classification system and so the regulation of some substances will inevitably change.

The translation of the physical hazards categories of dangerous goods did not result in significant changes. It will be more complex to determine whether the Directive applies based on new CLP classification but early indications show only a small number of sites coming into/going out of the Seveso III scope.
How will Seveso III be supervised?

All in all the Seveso III Directive lays down much more stringent provisions on inspections and enforcement of compliance. This will require more effort by competent authorities and will no doubt force some establishments to further improve their compliance programs. A key way to achieve higher levels of enforcement will be through planning routine inspections and non-routine inspections to ensure compliance and that violations are corrected.

Ideally, European legislation stimulates uniform rule application within the Member States and equal circumstances for ‘the regulated’. Enforcement remains the responsibility of individual Member States. However, enforcement and compliance practices differ considerably per member state. Member States have to develop competent resources and to share experiences to assure effective and consistent enforcement.

Regulators in member countries will have responsibilities in land use and planning areas – for example, where new establishments are located, how modifications to existing premises are made and the impact of transport routes on residential areas and on the public.

Responsibilities of businesses

Businesses will need to demonstrate they are using technology safely and that they have effective emergency response planning measures in place to mitigate risks. Performance indicators have to be reported. Safety Culture benchmarking in Major Hazards Industries shows negligence of safety regulations or unwillingness to comply. However, there is no need to report performance on safety culture to improve efforts on awareness and culture.

One of the major changes in the Seveso III directive is the active information to the general public on Seveso establishments following the Aarhus convention. This information will be made available permanently and electronically for all Seveso establishments according to minimum data requirements.

Hazardous operations like logistics may be outsourced to third parties but in many cases the process safety aspects are not covered by the outsourcing process. The industry should therefore set up a system of supply chain responsibility for process safety.

The role of the Operator: demonstrate compliance

- Substances ➔ Annex I 2012/18/EU
- Safety Management System
  - Documentation of the establishment
  - Safety Report, art 10, § 1b
    - Hazard Identification Risk Assessment
    - Risk Mitigation
    - Emergency Response Planning
- Underlying documents

Act ➔ Plan ➔ Do ➔ Check
Lessons learnt

The Seveso directive requires operators to respond on findings, near misses and incidents. However, there is no body that collates assessments and can act as a reference point ahead of future regulation. Any lessons learnt could take a long time to appear in formal industry guidance updates. If Europe had the equivalent of the US Chemical Safety Board there would be an effective forum for rapid investigation of significant events. Major operators do take action based on US CSB investigations.

Q&As

Q: Will some businesses find it difficult to comply with the new rules in a tough economic environment?
A: Seveso III could pose a problem for some organisations. It may require major investment that is for the long term. However, this could be difficult if you lack financial resources and many businesses, especially in the logistics sector, are low-margin, so they may find it hard to meet stringent safety requirements.

Q: What should organisations do if they change their processes?
A: Seveso III sets out stringent requirements covering management of change and to inform and consult the public likely to be affected by the change. Guidance is available in the directive to help organizations understand what they need to do to comply with the rules.

Q: Will information about a company’s safety record be publicly available under Seveso III?
A: Yes, in many cases it already is. Sharing information is an important way for lessons to be learned. The availability of consistent and comparable data should make this easier.

• DG ENV website: http://ec.europa.eu/environment/seveso/index.htm
• http://epsc.jrc.ec.europa.eu/id=503
• Enforment Matters, Enforcement and Compliance of European Directives in Four Member States, Esther Versluis, 2003
• http://webmagazine.maastrichtuniversity.nl/index.php/research/ue/culture/item/180-how-does-europe-handle-risks
• http://epcb.cc.eurp.eu/reference
• https://www.tno.nl/en/Topics/O/Occupational_Safety/Other_risks_at_work/Dangerous_substances

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