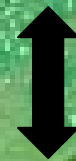




Safety report



Inspections

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**Convention on the Transboundary Effects of Industrial
Accidents**

**Assistance Programme for Eastern Europe, Caucasus and
Central Asia (EECCA) and South-Eastern Europe (SEE)**



Why European Directives?

The first reason to think about a directive

Chemical plant of the company Imesca, neighbor of the city of Seveso (≈ 22000 people)

09.07.1976	4:00 p.m.	start of production of Trichlorophenol in vessel 101
10.07.1976	2:30 a.m.	main reaction seems to be completed
	6:00 a.m.	crew changes, somebody stops the mixer of vessel 101
	$\approx 0:30$ p.m.	main reaction in vessel 101 starts again, increasing fast
	0:37 p.m.	safety valve of vessel 101 opens
	over ≈ 30 min	emission of ≈ 3 kg TCDD (Dioxin)

first days after

inside an area of $\approx 1 \times 6$ km plants shrivel
> 3000 animal die
> 200 people hospitalised
and the public ignores the real reason

8 days later

company statement : "TCDD was released"



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Main reasons of the accident

Lack of communication between the crews ↔ SMS

Insufficient cooling capacity (reaction) ↔ PHA

Main reasons for the size of the effects

Insufficient cooling capacity (emission time) ↔ PHA

No information to the public ↔ EAP

Ignorance of the production by authority



INSPECTIONS



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Timeline

Seveso (1976)



Seveso Directive I (1982)



Bhopal (1984)

Basel (1986)



Seveso Directive II (1996)

Awareness behind both Directives

“Whereas major accidents can have consequences beyond frontiers”



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Main objectives

Prevention of major accidents
Limitation of their consequences

Main strategic tools ↔ Operator

Major-accident prevention policy (Article 7)
Safety report (Article 9)
Emergency plans (Article 11)

Main strategic tools ↔ Authority

Domino effect (Article 8)
Land-use planning (Article 12)
Inspections (Article 18)



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Why a checklist?

Questions ↔ examples at one view.

Logical order can be shown simply.

Concrete results are quickly available.

Can lead directly to necessary actions.



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Why only Yes / Limited / No?

How should a missing calculation of effects be weighted against a missing management of change?



Numerically weighted questions are very exhausting.

What percentage is to be reached for acceptance?



The result is often not unique.



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Consequences of Limited and No

Limited



This part of the document needs to be improved until the next inspection.

One No



The **entire** document is not acceptable, it must be revised immediately.



The questions need to be formulated very carefully.



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Why divided into three “C”?

Completeness

↓
This part of the document is essential.

Correctness

↓
This part of the document is available, but is it correct?

Credibility

↓
This part of the document is available, but is it correct?

↙ ↘
Correctness and Credibility ↔ “Crosscheck” for Completeness



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