

Webinar ISPRA, 29 novembre 2021

Technical Working Group on Seveso Inspections (TWG 2)
Organizzata a Moss (NO) dal 29 settembre al 1 ottobre 2021
dalla Commissione Europea (JRC-MAHB) e dalla Direzione
Generale della Protezione Civile Norvegese

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Che cos'è

Incontro periodico orientato alla valutazione dello stato delle attività ispettive in materia di stabilimenti a rischio di incidente rilevante. Nell'ambito del meeting, sono generalmente trattati quali argomenti principali:

- lo stato di attuazione della Direttiva Seveso;
- lo stato di avanzamento dei bollettini per gli ispettori (Common inspection criteria)
- **Fondamentale: lo scambio di esperienze e modalità di svolgimento delle ispezioni**



Lo scopo

- verificare lo stato di avanzamento dei cosiddetti CIC Bulletin, attraverso brevi presentazioni ad opera dei CIC leader, dei seguenti documenti, definiti nel corso dei precedenti TWG2:
 - pianificazione dell'emergenza interna
 - rischio NaTech
 - training del personale
 - manutenzione dei sistemi di contenimento primari
 - gestione delle imprese appaltatrici
- ed inoltre lavori di preparazione per altri tre CIC
- sistemi di alimentazione elettrica di emergenza e black-out
 - sistemi di contenimento secondari
 - rischio ATEX e fonti di accensione



E, naturalmente...

- proseguire il tavolo di discussione in merito alle problematiche legate all'interpretazione ed all'attuazione, per ciascun Stato Membro, della nuova Direttiva “Seveso III”



I sistemi di contenimento secondari

Partendo dalla differenza tra sistemi di contenimento primario e secondario, l'attenzione del CIC si focalizzerà principalmente su:

- bacini di contenimento, progettazione, manutenzione, impermeabilizzazione;
- serbatoi a doppia parete, caratteristiche costruttive e sistemi di rilevazione e allarme;
- tubazioni concentriche per il trasporto di sostanze tossiche o corrosive;
- panoramica sui doppi fondi dei serbatoi.



La diffusione dei bollettini-1

Sono prossimi alla pubblicazione le appendici (check-list) per i seguenti CIC:

- Maintenance of primary containment systems
- Training of personnel

In fase di valutazione dell'ultima bozza:

- Internal emergency planning
- Subcontractors

I CIC sino ad ora pubblicati sono disponibili al seguente indirizzo:

https://minerva.jrc.ec.europa.eu/en/shorturl/technical_working_group_2_seveso_inspections/seveso_inspection_series





SEVESO COMMON INSPECTION SERIES CRITERIA

The Permit-to-Work System

This publication of the European community on Common Inspection Criteria is intended to share knowledge about technical measures and enforcement practices related to major hazard control and implementation of the Seveso II Directive. The criteria were developed by Seveso inspectors to aid in dissemination of good enforcement and risk management practices for the control of major industrial hazards in Europe and elsewhere. It is foreseen that these criteria may not only be useful to inspectors but they may also offer inspiration to industry safety managers as well.

This particular issue highlights a number of issues that are critical for successfully reducing risk using permit-to-work systems. Note that this document is not intended as a technical standard nor as a summary or replacement of any existing standards on the matter.

Definition

The permit-to-work is a documented procedure that authorises certain people to carry out specific work within a specified time frame. It sets out the precautions required to complete the work safely, based on a risk assessment. It describes what work will be done and how it will be achieved.¹

Purpose of the Permit to Work

The need for a permit to a work should be assessed for any work that may be conducted in an area where dangerous substances are present and for which no existing procedure has been established. Where proposed work is identified as having a high risk, strict controls are required.

All company employees or contractors should be authorised by a responsible company person (normally, the supervisor) for the execution of the work required with the issue of a permit-to-work. In this document both the functional role and risks of the installation are described along with the risks associated with the execution of the work itself. It can be defined and written either following a risk analysis performed by the HSE unit or (in the case of complex works) following a joint on-site examination, carried out by the

supervisor and the staff responsible for the execution of the work. In general, the preventive safety measures to be taken during execution and when work is completed can be established and documented either following the completion of a risk analysis performed by the HSE unit or, in the case of complex works, following a joint on-site examination, conducted by the supervisor and the staff responsible for execution of work.

When a permit to work may be needed

An effective system of permits-to-work cannot be achieved exclusively with the provision of a permit for the authorisation to work in dangerous areas, but it is an essential part of the SMS which is realized through specific procedures, instructions and authorizations.

According to this principle the work shall be carried out against previously agreed safety procedures, a 'permit-to-work' system.

The adoption of a permit-to-work system for authorising, managing and documenting the execution of works and modifications, including testing, surveillance, inspection, maintenance, construction and/or assembly and finally

¹ Health and Safety Executive (United Kingdom). <http://www.hse.gov.uk/cons/basiccs/permits.htm>

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Management of Change

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This particular issue highlights a number of issues that are critical for successfully reducing risk through effective internal procedures. Note that this document is not intended as a technical standard nor as a summary or replacement of any existing standards on the matter.

THE ROLE OF MANAGEMENT OF CHANGE

The management of change (MOC) over the life of a major hazard establishment is one of the basic elements in an effective Safety Management System (SMS). Studies from past accidents, (e.g., Flixborough, BP Texas City as well as many less well-known accidents) clearly show that a vast portion of chemical accidents have resulted from a failure to screen or analyse the impacts of a proposed change on risk, whether temporary or permanent. Even establishments that have management of change procedures can be vulnerable to accidents if the management of change process is incomplete or not systematically applied to all changes. For example, sometimes, organizational changes are not analysed and controlled as thoroughly as plant changes, resulting in reduced defence against accidents. Similarly, temporary changes or extraordinary changes in emergency situations may be overlooked. Common types of management of change failures associated with chemical accidents include:

- Failure to identify increased risk potential of a proposed change (screening failure)
- Inadequate assessment of the risk associated with the change (risk assessment failure)
- Lack of or inadequate implementation of the



Figure 1. Management of change is an important part of the safety management system

- recommendations of the risk assessment (follow-up failure)
- recommendations of the risk assessment (follow-up failure)
 - Exclusion of certain types of changes from the management of change process, in particular, temporary changes, and changes associated with procedures, staffing, site management, and infrastructure.
 - Failure to apply MOC to all life cycles of the plant, e.g., start-up and decommissioning

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La diffusione dei bollettini-3



seveso common INSPECTION series criteria

Natech Risk Management

This publication of Common Inspection Criteria is intended to share knowledge about technical and organisational measures and enforcement practices related to major hazard control and implementation of the Seveso Directive. The criteria were developed by Seveso inspectors to aid the dissemination of good enforcement and risk management practices for the control of major industrial hazards in Europe and elsewhere. This particular topic highlights the issues that are critical for Natech risk management. Note that this document is not intended as a technical standard nor as a summary or replacement of any existing standards on the matter.

DEFINITION AND SCOPE

Natural hazards, such as earthquakes, floods, storms, freeze etc., can trigger major accidents involving fires, explosions and toxic releases at establishments that process, store or transport dangerous substances. These technological "side effects" of natural-hazard impacts are called "Natech" accidents or simply "Natechs" (from "natural-hazard triggered technological accident"). Impacts on industrial operations and infrastructure are a recurring but often overlooked feature in many natural-disaster situations [1]. However, with the expected increase in intensity and frequency of natural events from climate change, Natech risk is an increasing concern in disaster prevention and risk management at local, national and international level.

Prevention of the release of dangerous substances from chemical hazard sites as a result of a natural hazard has been recognised as a critical objective in Natech risk management. For this reason, in 2012, modifications to the EU Seveso Directive explicitly introduced Natech risk as an important component of a hazardous site's overall risk management strategy for upper tier sites in the safety report (Annex II of the Directive). As a consequence, the major-accident prevention policy (MAPP), the internal emergency plan, the information provided to the competent authorities for the definition of the external emergency plans, and the safety

management system (SMS) should also consider this information. The common inspection criteria presented here are intended to serve as a reference for inspectors of Seveso sites on how to review these elements to ascertain the effectiveness of the site's Natech risk management approach.

CHARACTERISTICS OF NATECH EVENTS

The characteristics of Natech events differ from those of conventional technological accidents and there are currently no well-established methodologies for the assessment of Natech risk. Natural hazards can cause **multiple and simultaneous releases** over extended areas, possibly overwhelming on- and off-site response capacities. The **safety measures** in place to prevent conventional major accidents or mitigate their consequences are **often ineffective or insufficient against Natechs** as they are usually not designed to withstand a natural event [2]. For example, in case of hazardous-materials releases triggered by floods (Figure 1), flooded catchment bunds are typically unable to contain a release, allowing the unconstrained spreading of hazardous liquids in a larger area [3].

Utilities are also often disrupted during a natural event (e.g. power needed for process control or for safe shut down, water for fire-fighting or cooling). In such situations, **domino events are more**

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Internal Auditing Procedures

This publication of the European community on Common Inspection Criteria is intended to share knowledge about technical measures and enforcement practices related to major hazard control and implementation of the Seveso II Directive. The criteria were developed by Seveso inspectors to aid in dissemination of good enforcement and risk management practices for the control of major industrial hazards in Europe and elsewhere.

This particular issue highlights a number of issues that are critical for successfully reducing risk through effective internal procedures. Note that this document is not intended as a technical standard nor as a summary or replacement of any existing standards on the matter.

Definition

Internal auditing can be defined as a process of independent, systematic examination to assess the extent of conformance with defined standards and recognised good practice and to thereby identify opportunities for improvement.

For a major hazards operator a process safety audit checks that what the business does in reality matches up to:

- what it says it does in terms of policies and procedures
- what it should do to ensure that major accident risks are reduced to as low as reasonably practicable.

The task of audit is an integral element to process safety management systems and mandated by the Seveso directive for major hazard establishments.

Inspection of internal auditing

It should be noted that the term 'auditing' involves fundamental assessment of the validity and reliability of the safety management system itself. It should not be confused with some operator's use of the term "auditing" to refer to activities such as safety



Fig. 1 Internal audit procedures play an important role in the safety management system

tours, physical conditions inspections and behaviour observation carried out by line managers as part of their active performance monitoring activities. The relationship of audit in both monitoring and system review activities is illustrated in Figure 2 on the next page.

It is expected that the description of the operator's arrangements for audit will contain the following:

- the resources and personnel required for each audit, bearing in mind the need for expertise, operational independence and technical support;
- the audit plan indicating how it has been prioritised;

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Risultanze dal primo webinar organizzato in ambito TWG2 “Seveso Enforcement and Site Risk Management during the Covid-19 Pandemic” del 9 febbraio 2021.

Il webinar, organizzato nell'ambito delle attività del TWG2, ha potuto contare sulla partecipazione di tre ispettori ISPRA che hanno presentato altrettanti aspetti relativi alla gestione delle nuove modalità di svolgimento delle ispezioni e risultati delle attività svolte.

Si è deciso di organizzare un webinar nel primo trimestre del 2022, con il JRC in veste di coordinatore. L'argomento riguarderà l'ageing nei siti Seveso e la manutenzione dei sistemi di contenimento primari. Il secondo argomento di preferenza riguardava le lezioni apprese e le indagini sugli incidenti, che potrà essere trattato in futuri webinar a partire dal 2023.



- **Tarragona, Spagna (2020) (DNV, Norway)**

Incidente occorso il 14 gennaio 2020, presso lo stabilimento IQOXE, azienda produttrice di ossido di etilene, con un bilancio di tre morti, otto feriti, perdite per milioni di €, mancanza di coordinamento istituzionale e allarme tra la popolazione, l'inchiesta giudiziaria è ancora aperta. Le conclusioni provvisorie indicano reati di colpa grave con morte, lesioni e danni nonché violazione dei diritti dei lavoratori.



- **Leverkusen, Germany (2021) (Currenta, D. Draeger, Germany)**

Incidente occorso il 27 luglio 2021 presso lo stabilimento Currenta. Presumibilmente una reazione chimica incontrollata ha portato all'esplosione del serbatoio 3 del parco serbatoi dell'impianto di incenerimento dei rifiuti pericolosi.

Dalle prime indagini, la reazione è proseguita così velocemente che i dispositivi di sicurezza non sono stati in grado di dissipare la pressione, causando l'esplosione del serbatoio.



- **Hallein, Austria (2021), (E. Simon, Austria)**

Incidente occorso il 2 giugno 2021, a causa di un probabile difetto di un giunto saldato (probabile corrosione). Essendo stabilimento di soglia inferiore, non era soggetto a obblighi di analisi di rischio e le Autorità competenti non dovevano redigere il Piano di Emergenza Esterna.

Il gestore, sottoposto a procedimento penale, ha dato seguito a importanti adeguamenti impiantistici e gestionali.

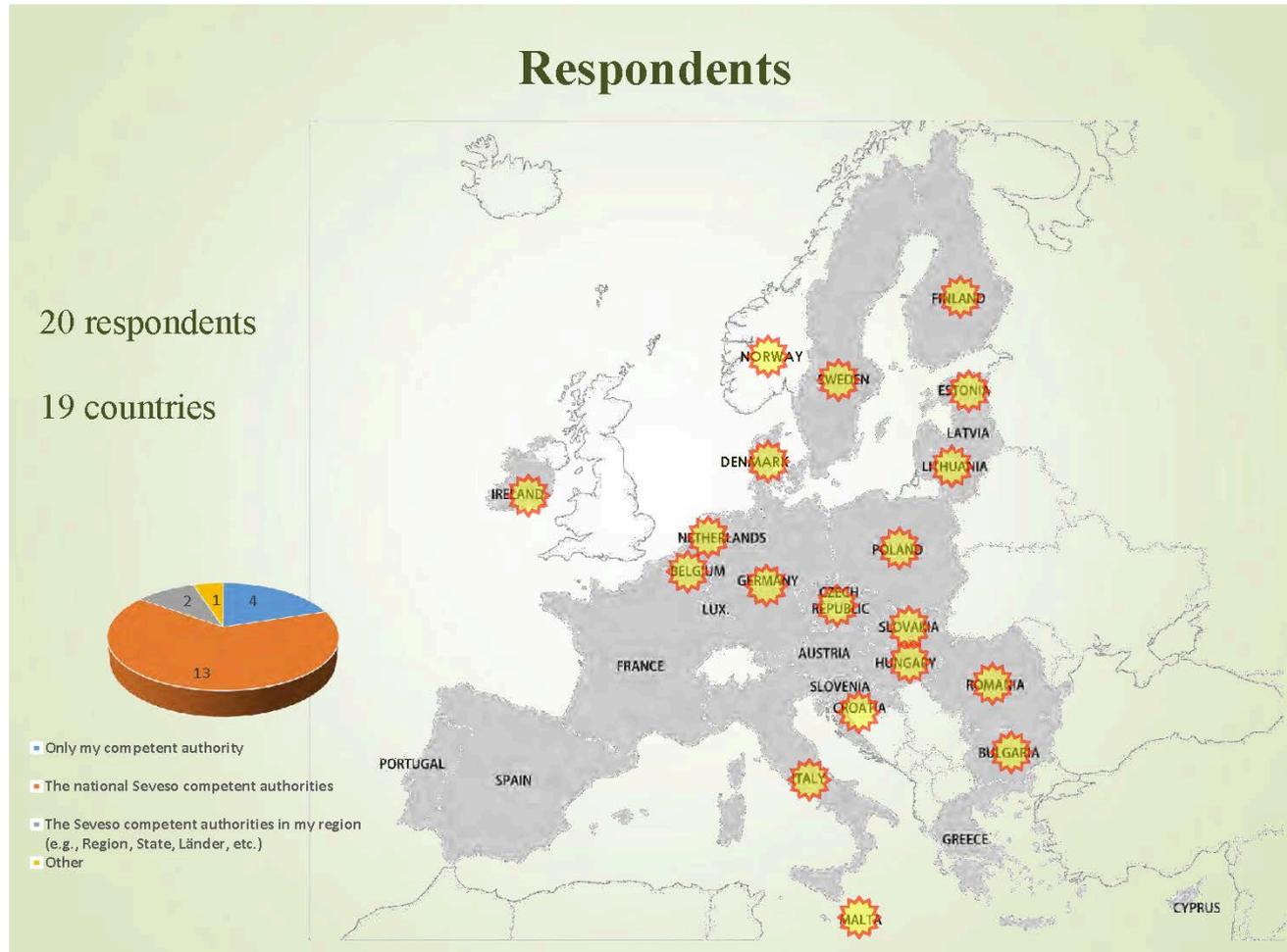


Al termine del meeting, sono state presentate le prime risultanze dello studio sull'attuazione dell'articolo 19 della Direttiva Seveso in merito alle modalità di divieto di esercire l'attività .

In Italia il nostro art. 28 comma 8

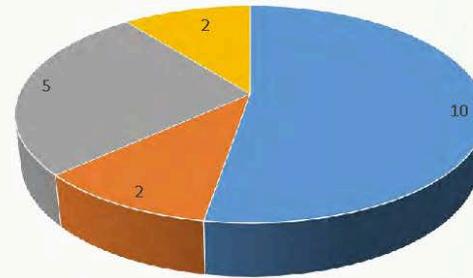


Risultanze della ricognizione «proibizione attività»-2



Background

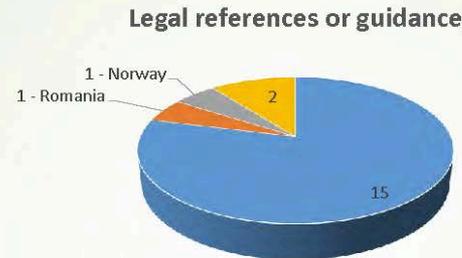
Who can initiate the prohibition of use?



- Seveso inspectorate
- Another Seveso competent authority (other than the inspectorate)
- Seveso inspectorate + Another Seveso competent authority (other than the inspectorate)
- Other



Criteria for „measures are seriously deficient”



- There are no specific criteria or conditions established. The decision is made on a case-by-case basis.
- Criteria and/or conditions for making this determination are given in legislation
- Criteria and/or conditions for making this determination are given in a guidance document
- Other

Others:

Finland: In Finnish, we have criteria for what kind of improvements are demanded from the company after inspections. Usually, we give the deadline and if the company doesn't react in time → 1. fines 2. prohibit of operation

Slovakia: (1) imminent threat to human life or health, the environment, or property (2) the operator has not taken measures to remedy serious violations of obligations or serious deficiencies in operations



Conclusioni-1

L'applicazione della Direttiva Seveso III presenta ancora aspetti problematici. È opinione di un discreto numero di partecipanti che siano necessarie specifiche attività all'interno del TWG2 finalizzate alla discussione e approfondimento di alcune tematiche, al fine di trovare soluzioni comuni e condivise.



Conclusioni-2

È apparso chiaramente che la Direttiva fornisce indirizzi su come organizzare l'assetto normativo presso ciascun Stato Membro nei riguardi della prevenzione degli incidenti rilevanti. Pertanto, i Paesi che hanno adottato il recepimento diretto, senza l'adeguato approfondimento di ciascuna tematica, si trovano in difficoltà nella sua applicazione. In questo contesto, l'approccio seguito dall'Italia, nella realizzazione di un "testo unico", nella predisposizione di uno strumento come il Tavolo di Coordinamento per l'uniforme applicazione, nella possibilità di accedere a una serie di norme tecniche specifiche per l'attuazione del SGS-PIR (le UNI 10617, 10616, 10672 e 11226) si dimostra sicuramente più efficace.



Conclusioni-3

Allo stesso modo, da più parti è emersa la necessità di un approfondimento per gli ispettori riguardante le attività ispettive e strumenti per verificare l'efficacia delle metodologie e strategie adottate dai gestori degli stabilimenti Seveso nell'attuazione degli obblighi della Direttiva.



GRAZIE PER L'ATTENZIONE

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