



CIC
(Sub)contractors

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CIC - Follow up of contractors

- **Contractor:** A company that is hired by a (Seveso) establishment to perform work on a contract basis.
- **Subcontractor:** Subcontractors **undertake a contract from the contractor.** Subcontractors undertake work that a contractor cannot do but for which the contractor is responsible.
- Why? Supply of skills, cost reduction, flexibility, 3rd party inspection...
- Typical type of work:
 - Installation/building of new equipment
 - Maintenance – including hot work
 - Housekeeping (cleaning and painting)
 - Inspection of equipment
 - Transportation
 - Security guarding

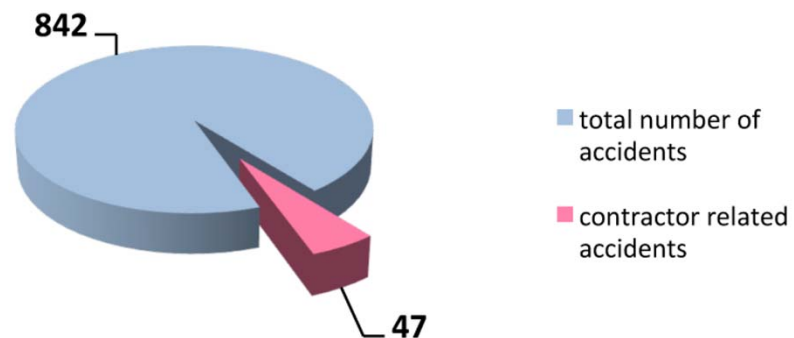
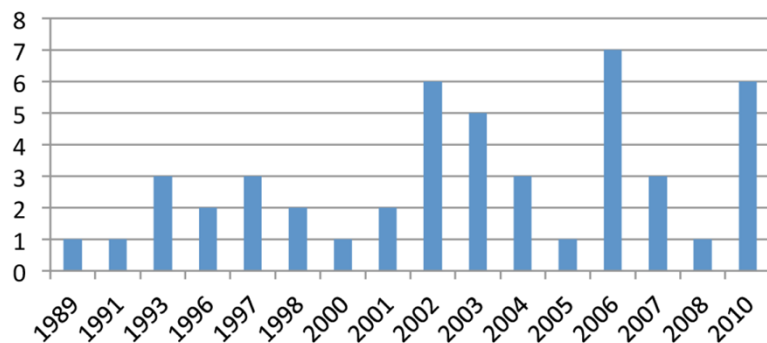
➔ Risk related activities in a Seveso site



Accidents related to contractors

- **MAHB Lessons learned Bulletin No. 2 (2012):**
 - 5 % of total accident report in the eMARS related to contractors.
 - More than 60 people died and about the same number injured

Number of contractor-related accidents by year



Common factors associated with these accident:

- No permit-to-work issued;
- Insufficient training of contractors;
- Insufficient communication between the operator and the contractor;
- Insufficient oversight of the work and working conditions;
- Lack of compliance to safety requirements;
- Deviation from job procedure;
- Lack of attention to warning signs.



Contractor and Impact on risk control

- Shifting from «doing it» to «having it done»

- Risk of loss of expertise among internal staff
- Lost knowledge and history - Contractor keeps documentation
- Lack of overview of concurrent activities
- Risk of neglecting the outsourced tasks in risk assessments
- Client/customer relationship – trust or fear
- Cultural and language differences



Other important considerations:

- The accidents are not necessarily caused by the use of contractors – could have happened with in-house experts
- Contractors can be valuable partners in controlling risks
 - They are experts and know the technology and risk
 - High experience in their field – safe work
 - Serves as a channel for sharing knowledge and feedback in the entire industry



Subcontractors in Seveso III directive

Annex III (b) the following issues shall be addressed by the safety management system:

- (i) **organisation and personnel** — the roles and responsibilities of personnel involved in the management of major hazards at all levels in the organisation, together with the measures taken to raise awareness of the need for continuous improvement. The identification of training needs of such personnel and the provision of the training so identified. The involvement of employees and of **subcontracted personnel** working in the establishment which are important from the point of view of safety;
- (ii) **identification and evaluation of major hazards** — adoption and implementation of procedures for systematically identifying major hazards arising from normal and abnormal operation **including subcontracted activities** where applicable and the assessment of their likelihood and severity;
- (v) planning for emergencies — adoption and implementation of procedures to identify foreseeable emergencies by systematic analysis, to prepare, test and review emergency plans to respond to such emergencies and to provide specific training for the staff concerned. Such training shall be given to all personnel working in the establishment, including relevant **subcontracted** personnel;

2012 - LPG accident at a food-factory –
Example of contractor related accident



Introduction

- LPG was used for heating of water and production of steam – 30 kbm storage tank.
- The factory had engaged an «experienced» company to requalify the tank according to the regulated 10 year frequency.
- The company performing the requalification were emptying the tank by pumping the liquid phase LPG to transportable tanks, and thereafter burning off the gasphase.
- In order to enhance the pressure in the tank and speed up the burning off process, the company connected a water hose from the factory water purification plant to the bottom of the LPG tank.





The accident



- Father and son was performing this work.
- The son leaves the site in order to buy lunch.
- When he leaves the flare is burning, the manometer on the tank shows 0,5 bar overpressure.
- As he returns from shopping an explosion occurs in the water purification unit, the entire building collapses and several nearby buildings are damaged by the overpressure.
- The father dies.







What went wrong?

- The connection of the water hose to the tank was highly irregular, and a back-flow of gas from the tank to the water purification plant occurred.
- The explosion in the water-purification plant was caused by non-EX equipment.
- A lot of irregularities had taken place which caused this accident to happen
 - The company (owner) had no written procedures for this operation
 - The contractor did not have the right accreditation for this kind of work
 - (though the representatives for the contractor said that the old operator had long experience and the young one was under training)
 - The car used did not have the right ADR approvals
 - In addition a lot of safety issues was not properly evaluated before committing this operation (lack of warning signs, proper risk assessment)

Managing contractors: 5 steps

- **STEP 1: PLANNING** ■ Define the job ■ Identify hazards ■ Assess risks ■ Eliminate and reduce the risks ■ Specify health and safety conditions ■ Discuss with contractor (if selected)
- **STEP 2: CHOOSING A CONTRACTOR** ■ What safety and technical competence is needed? ■ Ask questions ■ Get evidence ■ Go through information about – the job – the site, including site rules ■ Ask for a safety method statement ■ Decide whether subcontracting is acceptable. If so, how will health and safety be ensured?
- **STEP 3: CONTRACTORS WORKING ON SITE** ■ All contractors sign in and out ■ Name a site contact ■ Reinforce health and safety information and site rules ■ Check the job and allow work to begin
- **STEP 4: KEEPING A CHECK** ■ Assess the degree of contact needed ■ How is the job going: – as planned? – is the contractor working safely and as agreed? – any incidents? – any changes in personnel? ■ Are any special arrangements required?
- **STEP 5: REVIEWING THE WORK** ■ Review the job and contractor – how effective was your planning? – how did the contractor perform? – how did the job go? ■ Record the lessons