
Leadership in the Drive to Enhance Process Safety

Cefic Responsible Care Conference

Manchester 23 October 2008

HSE – Who we are and what we do



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- Health and Safety Executive – regulator for workplace health and safety throughout Great Britain (England, Scotland and Wales not N Ireland)
 - Our mission/purpose is the prevention of death, injury and ill health to all those at work and those affected by workplace activities
 - We provide advice and guidance to all businesses in GB on what they need to do to comply with the law
 - We inspect workplaces to audit their health and safety systems
 - We take enforcement action against those who breach or ignore the law
 - We alert dutyholders (employers) to new and emerging risks as they are identified
 - A healthy and constructive relationship with business

HSE – Who we are and what we do



- We cover all workplace activities in GB – offshore oil and gas, nuclear, chemicals, construction, agriculture, engineering, service industries, public and private sector.....
- ~ 3500 people located throughout GB
- Hazards which cause injury (slips, trips and falls), ill health(disease & mental health) and major hazard activities (potential to give rise to significant harm including to the public)
- Strong international connections with policy makers and regulators

The GB regulatory framework

- Overarching framework set by the Health and Safety at Work Act 1974
 - Goal setting, not prescriptive legislation
 - Places a clear duty on “ those who create the risk to manage the risk”
- Remarkably resilient piece of legislation
 - readily adapted and applied to today’s range of risks and activities
- In GB HSE is the competent authority and lead enforcer for REACH and the SEVESO directive (COMAH)

An external perspective on Responsible Care



- Started out as a shining example of an industry led health and safety voluntary programme and what can be achieved
- Lack of clarity about what/who it covers (and what it doesn't)
- Real performance measurement is weak and all “lagging indicators”
- Process Safety is lost/invisible
- Has lost valuable ground and impact as other schemes and accreditation processes have emerged

Process and Product Safety – we need both!



- Public concern shifted from process to product during the 1990s
- Based on an assumption that Process safety was being properly managed - not forgotten/overlooked
- Public trust and confidence takes years to build and minutes to lose
- Industry reputation and performance is only as good as its weakest link
- HSE warned CIA members in 2003 that statistics indicated a major process incident was likely to happen somewhere

What happened next?



Texas City



Buncefield

Does it matter that these were not chemical plants ??

Process Safety and Leadership



- Process safety is never fixed – it requires constant attention
- Process automation and management systems have brought huge benefits but also create a false sense of security
- Lack of practice and experience in dealing with unusual situations
- The impact of changes to a process may take some time to manifest themselves
- Corporate memory being lost
 - failure to learn important lessons from the past
 - Changes in ownership add to the problem
- Leadership is for everyone not just the Board

Process safety – for the Board but not from the Board room



- Measurement and reporting of the right things
 - Absence of incidents is not a good indicator that process safety is being managed
 - Minor/trivial injuries even less so
- Listen to the concerns of those who are closest to the process
 - Ask the right questions
 - Welcome expressions of concern
 - Don't suppress "bad news"
 - Dare to ask "what is the worst that could possibly happen?"

Process safety – for the Board but not from the Board room



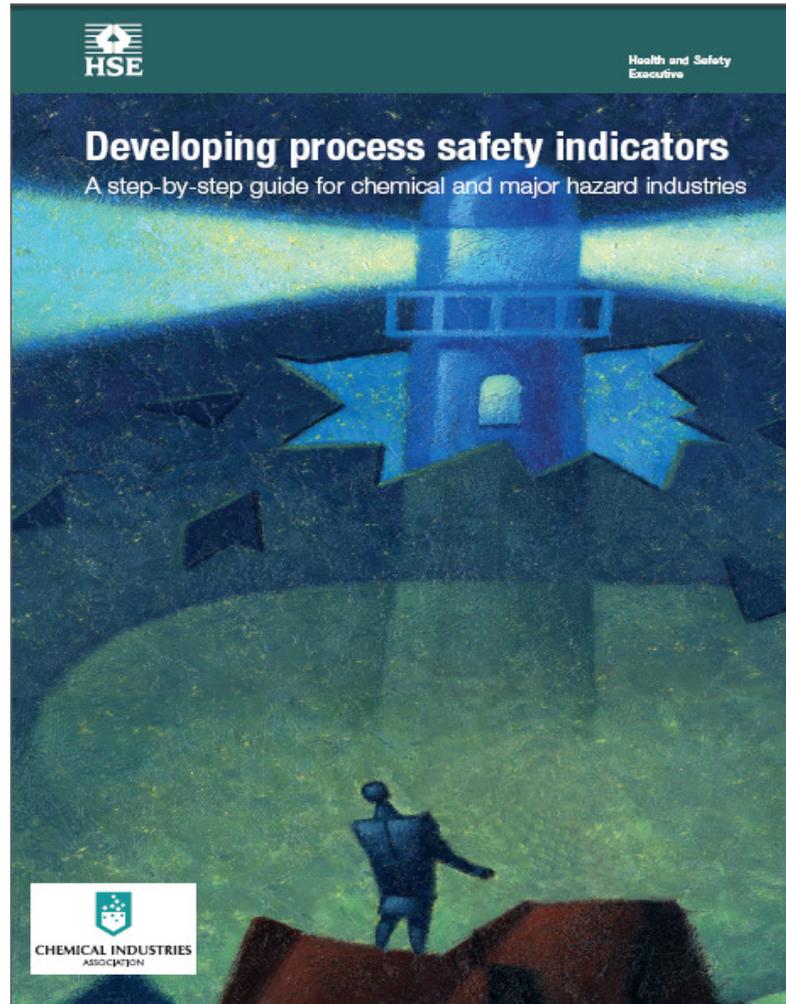
- Understand and Respect the process
 - Harsh and hazardous processes
 - Chemical reactions can and do go wrong
 - Often the most basic things that fail
- Understand the what and why of safety critical features
 - Put in for a good reason
 - How is process change managed?
 - Is there a safety critical impact?

Process safety – for the Board but not from the Board room



- Develop a meaningful assurance system
 - What needs to be measured
 - Look for early warning signs
- Lead by example and action
 - Respect and remember lessons from the past
 - Pay attention to process safety in design and plant change
 - Take decisions that do not compromise longer term integrity for the sake of the short term
 - Don't delegate or assume others will take care of it

Developing Process Safety Indicators and Measurement



Developing Process Safety Indicators and Measurement



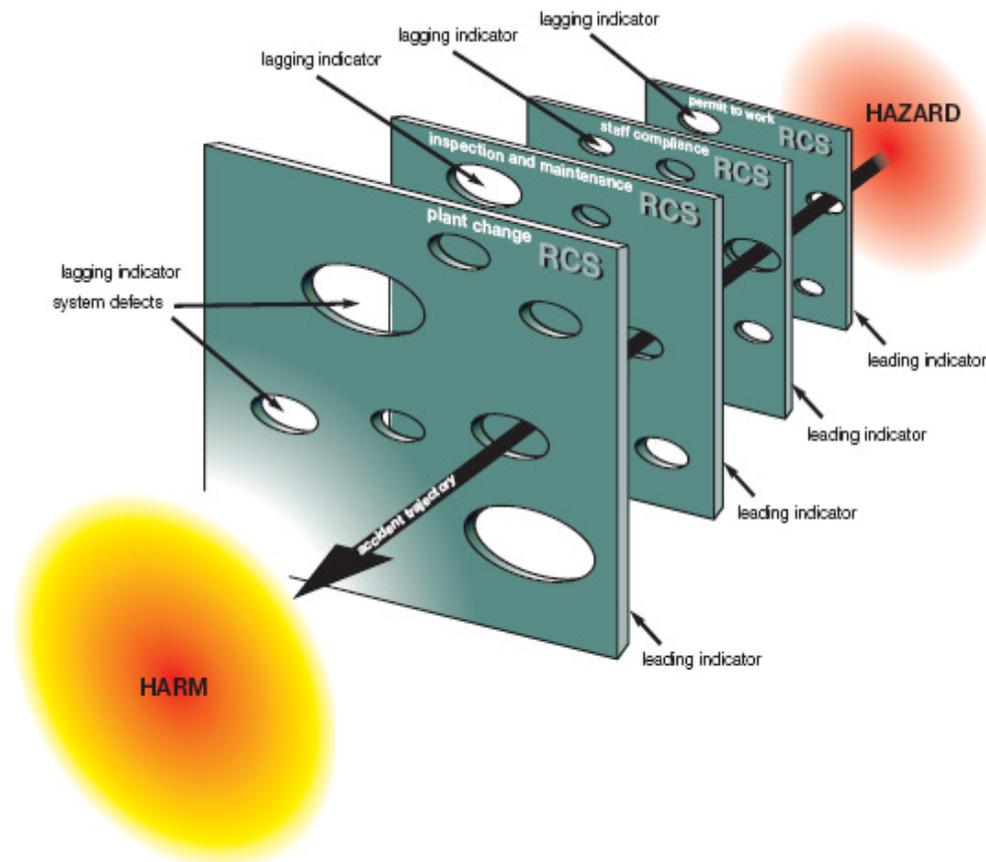
- Guidance produced jointly by HSE and CIA in 2006
- Aimed primarily at major hazard organisations but equally applicable to any chemical business of any size
- Recognised over-reliance on failure data to monitor performance
- Switch of emphasis to leading indicators and measuring process safety
- Early warning essential to avoid major incidents

Developing Process Safety Indicators and Measurement



- Six step approach to a “Process Safety Management System”
 - parts of an organisation’s management system intended to prevent major incidents arising out of the production, storage and handling of dangerous substances
 - Comprises many Individual/specific risk control systems
 - Dual assurance – leading and lagging indicators

“Major accidents occur when a series of failings within several risk control systems materialise concurrently”



Learn from others

- The challenges are not unique to your company or your sector
- You do not have a monopoly on good practice
- UK conference of all major hazard industries in April 2008
- Cross sectoral Process Safety Leadership Group

A Personal perspective (1) - from the industry



- Joined chemical industry in 1975 – 1 year after Flixborough
- Properly trained in process safety – this must never happen again
- Saw memories fade – even after Bhopal
- Part of the generation who put in process automation and control, SPC, 6 Sigma, ISO.....
- Witnessed the shift of attention from process to product at CIA

A Personal perspective (2) - from the outside



- You are not as different as you think you are
- Fully embedded and comprehensive safety culture is present in some but by no means all companies
- You are part of the same industry as oil and gas and petroleum refining as far as your stakeholders are concerned
- There is a reluctance to look outside sectoral/national boundaries sector and learn from others
- Memory and expertise has been lost and not replaced

Summary (1)

- Responsible Care is an enduring commitment which the chemical industry can take pride in
- It must be comprehensive and consistent – not selective
- It must evolve and continue to lead and challenge the industry in all areas
- Beware of the dangers of focussing on some issue at the expense of/to the neglect of others

Summary (2)

- Process safety must be managed on a continuous basis
- It must be led from the top and cascaded throughout the organisation
- Learn the lessons of the past (and from others) and embed them in your organisation
- Never become complacent



Thank you for listening and for the
invitation

Enjoy your conference