

Process Safety Leadership: Engaging with Senior Managers

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Corporate Responsibility

- We live in an age of corporate social responsibility
- Successful businesses demonstrate that they take good care
- It is becoming a case of ‘who cares wins’
- Good words, corporate branding, commitments made in policy statements or glossy brochures is not enough – it is delivery that counts

Successful process safety management is essential for business success

- Failure in process safety management can never deliver sustainable business success
- The consequences of getting control of major hazard wrong is extremely costly
- Getting it right pays large dividends

Process Safety

- Process safety is shorthand for the ways in which major hazard risks are controlled
- one company's accident is everyone's problem
- root causes are often common across all organisations.
- only as good as the weakest in your sector

Process Safety Leadership:

- Successful process safety management is essential for business success
- Leaders:
 - need to understand major hazard risks within their companies
 - Should ensure process safety management is managed in a systematic way
 - identify vulnerability and be sceptical
 - should focus on major hazard safety outcomes
 - Should work together, across industry, to share lessons and good practice

So leadership is vital – but what does it consist of?

- The vision of the organisation. The way in which:
 - Process safety is given the right degree of attention and focus;
 - Process safety considerations feature in key business decisions, and
 - Understanding of major hazard risk and the importance of critical control measures is communicated and championed.
 - “*what we do when no one is looking or checking up on us*”.

Engagement with Senior Managers

- Operators, managers, engineers, contractors and members of the Board all have a role
- Senior managers who make the big decisions and plant managers who make the day to day decisions have the most important role
- Engineers and safety professionals who have expertise need to engage with senior managers in improving understanding of process safety risks.
- Use of non-technical terms and presenting issues in a plain everyday way is important



Buncefield: Why did it happen?

The underlying causes of the explosion and fire at the Buncefield oil storage depot, Hemel Hempstead, Hertfordshire on 11 December 2005

Management systems were both deficient and not properly followed, control room staff had little control over flow rates and timing of receipt and did not have sufficient information to manage precisely the storage of incoming fuel

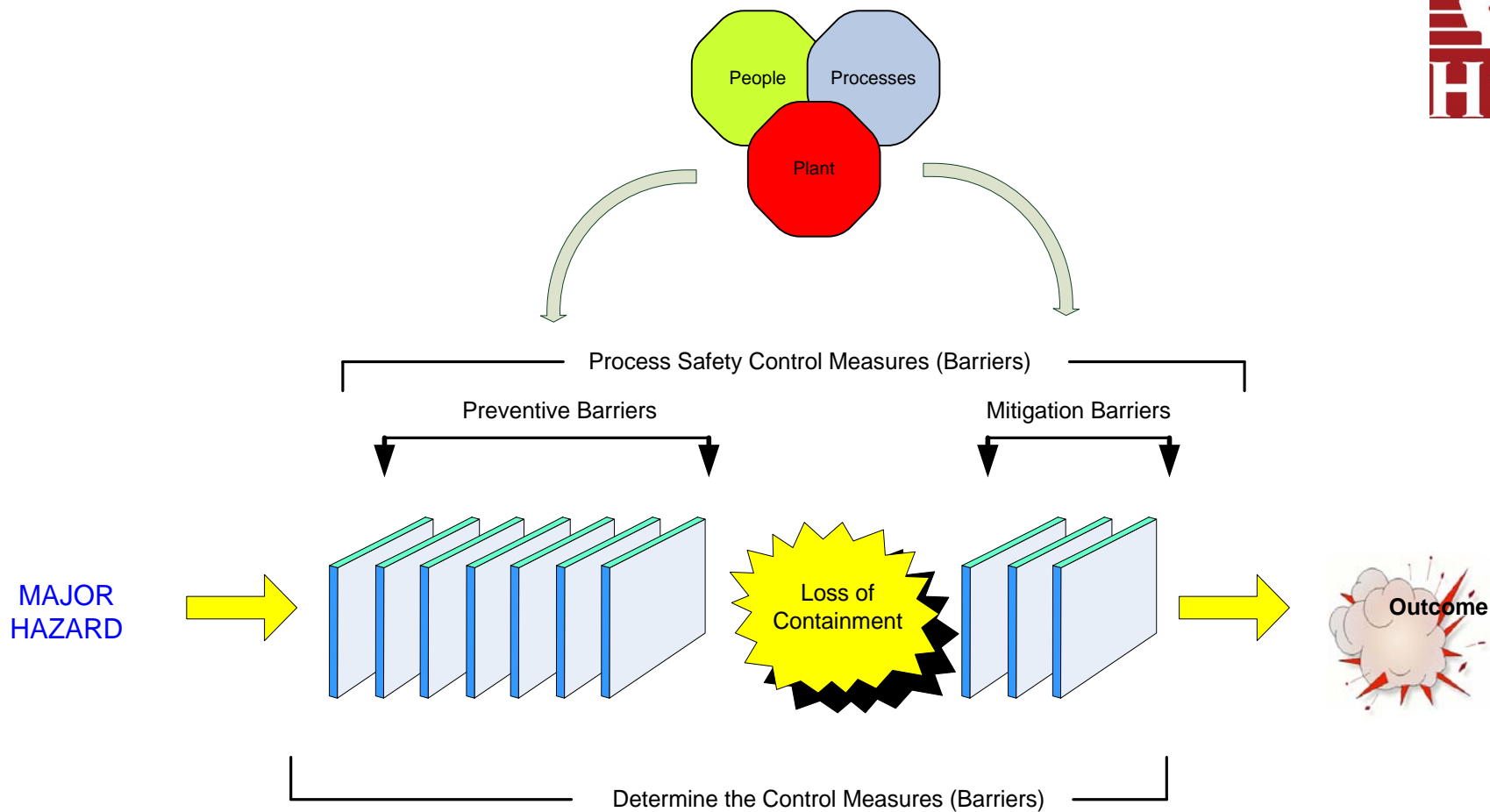
A culture where keeping the process operating was the primary focus and process safety did not get the attention, resources or priority that it required

Leaders Need To Understand and Assess the Risks

- What hazards are present
- What are the challenges to plant integrity/containment
- How can this give rise to a major accident
- What is the likelihood and what are the consequences

Manage process safety in a systematic way

- Based on a recognised PSM standard, eg CCPS guidelines
- Multiple layers of protection – based on James Reason’s ‘Swiss cheese model’
- Tailored to the risks – not one size fits all
- Systems designed to manage conventional safety don’t easily transfer to major hazard risks
- PSM must be dynamic and never fixed



Identify Vulnerability

- Know exactly how the plant containment might fail
- Know what the critical control measures are
- Recognise that people are the weakest part of a PSMS

Risk Profile

- Control measures tailored according to the 'risk-profile'. More emphasis, more in-depth control in parts of the process where numerous challenges to integrity and consequences are significant



People are the weakest part of a PSM system

- Senior Executives because:
 - Don't understand risk
 - Trust absolutely the system design
 - Make business decisions without understanding the impact on process safety management
 - Don't know how to challenge what they are being told
 - Have a strong bias towards messages about success

Focus on Process Safety Outcomes

- Leaders should:
 - focus on process safety outcomes and not draw comfort from the complexity of the control measures and the systems
 - Question perfection - never fully believe that risks are being adequately controlled – should actually know based on information from Key Process Safety Indicators – KPIs
 - Identify failings and act quickly and decisively
 - don't just measure and feel good

PSM Senior Executive Training

- Addressing leadership shortcomings has not been easy, as whilst there are any number of training courses available for engineers there is very little on offer for senior leaders of major hazard organisations, despite the fact that understanding the risk from a major accident is just as important as understanding every other type of business risk, if not more so.
- The good news is that industry and the regulator have recently come together to develop recognised training standards in process safety leadership and process safety management for everyone from front line operators to the chief executive of a major hazard organisation.

OECD Guidelines on Process Safety Governance – June 2015

- A team of international experts in process safety and leadership have written guidelines focused on helping chief executives and senior leaders recognise their impact upon process safety. These guidelines are designed to be readily adopted within existing corporate governance programmes such as Responsible Care, or can be used as a standalone set of principles by major hazard organisations, where the stakes are high and consequences extreme.

How engineers can help: Top Ten Tips for Success

- Present process safety risks as business risks rather than relying solely on complex technical arguments when speaking to senior leaders
- Keep process safety on the agenda at all meetings, and offer to present process safety updates to senior management meetings. Avoid jargon!

10 Top Tips

- Help senior executives to understand the basics of process safety management and take business decisions in the light of the potential impact on safety
- Ensure that senior leaders understand that process safety risk management needs a systematic approach based on several layers of protection, and that a one size fits all is not adequate.

10 Top Tips

- In simple terms describe the risk profile for your part of the business and highlight the most critical control measures
- Explain that despite having expertise and diligence in risk assessment and design of protective measure nothing is ever perfect and flaws will appear, systems deteriorate, often without any immediate adverse impact but this erosion of the protective measures often goes unnoticed or checked and indeed tolerated

10 Top Tips

- Make the case for focused process safety performance information being provided to the management team
- Provide real and focused evidence and data that highlights where systems have deteriorated in a format that can be readily understood by senior managers – and include the potential consequences, backed up by previous real-life incidents, where possible

10 Top Tips

- Show senior leaders the TCE article
- Advise your most senior manager(s) of the availability of the Process Safety Leadership training course

Safety resources

Loss prevention bulletin

www.icheme.org/losspreventionbulletin

Safety and Loss Prevention Special Interest Group

<http://www.icheme.org/SafetyConsequenceModellingFlyer>

Training courses

www.icheme.org/courses

Hazard series dates for your diaries:



UK & Europe

Hazards XXIII,
12–15 November 2012, North West, UK

www.icheme.org/hazardsxxiii



Asia Pacific

The second Hazards Asia Pacific Symposium,
16–18 April 2013, Kuala Lumpur, Malaysia

www.icheme.org/hazardsap2013

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Thank you

Any questions?

