



EDUCATE YOUR BOSS!

Ian Travers and **Neil Smith** explain how you can help your senior team understand and fulfill its duty to safety

WHO has the biggest impact on process safety in your organisation? Is it the operators and shift managers who ensure manufacture continues smoothly on a daily basis, the engineers who continually strive for improvements in process integrity, efficiency and effectiveness, or the senior leaders who set the culture and direction of the organisation?

In reality, all of these people and more have a role to play in managing process safety, and each has to recognise just how important their influence is on the continued safe operation of a major hazard organisation. Of course, it can be difficult to help others – especially those senior leaders with a non-technical background – to recognise the effects that their decisions can have on process safety.

From my experience of meeting with non-technical senior leaders, it's crucial not to use the sort of niche, technical terms that you might freely exchange with your peers. If your audience doesn't understand the jargon that you're using, then frankly the discussion will be useless to them. Believe me, this isn't

the time to be getting out your Swiss Cheese model. You need to tailor your message (see Top 10 tips for success, p26).

I hope this article finds its way into the hands of senior business leaders, and urge IChemE's members to pop it into their bosses' inboxes. If they've been successful and you're a non-technical reader then it's important to clarify that by 'process safety' I mean the way in which major hazard risks are managed and controlled, rather than risks to occupational or personal safety. I'm not talking about systems to prevent slips, trips or falls but rather much larger incidents that not only harm health but can cause multiple fatalities, as well as huge environmental, financial, and reputational damage.

We mustn't forget that major hazard businesses have the potential for catastrophic impact. The exploration and production of oil and gas, the manufacture and storage of chemicals and petrochemicals, and the generation of energy involve complex processes with in-built intrinsic hazards that need careful management. The measures your site needs to contain such hazards in a controlled way are equally as complex. This

the new standard

In 2010, writes **Neil Smith**, the National Skills Academy for Process Industries (the Skills Academy) and the Chemical Industries Association (CIA) identified the need from customers and members for an integrated programme of process safety management (PSM) training. They shared a vision to create a framework of PSM training standards tailored to each level in the organisation, sponsored by the key trade bodies, and supported by the Health and Safety Executive (HSE).

After further consultation, a collaboration of the Skills Academy, CIA, HSE, UKPIA, Unite the Union, IChemE and Cogent SSC established the Process Safety Management Project Board, with representation from senior industrialists across the sector with experience, expertise and interests in PSM.

To develop the training standards, an expert panel was established by Cogent and the CIA, supported by stakeholders, industry and training organisations. A recurring theme during our early discussions was competence at board and site director level.

Initial research showed that the bulk of existing training was aimed at process safety specialists, with minimal support available at the senior executive level, or for that matter for process operators and supervisors.

So we began to develop a training standard for leaders and this was completed in summer 2011, resulting in *Process Safety Leadership for Senior Executives*. The one-day programme has been designed to accommodate single company in-house or multi-company open courses, but perhaps unique to the training standard is a requirement for a review of progress within 3-6 months of participating in the course.

We set ourselves the goal to have at least 50 Top Tier COMAH operators committed to the training course by the end of 2011 (there are approximately 350 top tier sites and 700 lower tier sites in the UK). By the end of November 2011, the Skills Academy was able to confirm that 84 Top Tier sites had expressed their strong interest in participating in the programme, and interest continues to grow.

We are developing a second training standard called *Process Safety Management Foundations* which will be launched early in 2012. This is aimed at all levels of staff within an organisation from site management to operational staff, to provide a clear knowledge of the principles of process safety management across an organisation.

In 2012 the first conference on process safety management training standards will provide industry and stakeholders with a further opportunity to influence the strategy for developing the next phase of training standards development. *Raising the Bar on Process Safety Management: National Strategy Launch* will be held in London on 15 March 2012.

If you'd like to attend this conference contact industry@nsapi.co.uk or call the conference booking team on 0845 607 0140.

This training standard addresses an issue that was holding back companies from making progress with improving safety leadership on the ground. Access to tailored training provision to an agreed standard on major hazard risk management for senior executives, developed and supported by the industry is a major step forward. Having completed this training, senior executives will be competent to take a much more visible role in leading their organisation and will be better placed to take integrated consideration of major hazard risks as an essential part of key business decisions.

Judith Hackitt, HSE chair

requires a systematic approach to managing risk, based on having several layers of protection to guard against each process risk, and robust emergency arrangements in case the worst does happen.

Senior leaders need to recognise how important their influence is on the safe running of such a plant, whether that plant is located on their doorstep, or on the other side of the world. It might not be immediately obvious what effect reducing the number of maintenance hours, or extending the frequency of inspections of critical process plant can have on the safety of a plant, but the future consequences can be extreme.

The need for this recognition from the board has become especially pertinent following investigations into a number of recent high profile accidents such as the explosions and fires at BP's Texas City oil refinery and the Buncefield fuel storage depot in the UK, which identified various technical failings, but also how shortcomings in leadership by senior executives contributed to the incidents.

Addressing these shortcomings has not been easy as while 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 (see box, above). The first offering to come from this partnership is a one-day programme, *Process Safety Leadership for Senior Executives*. The benefits of this training are clear:

- The course is dedicated and tailored to senior executives and provides a means for them to become more effective process safety management leaders.
- It puts PSM, and risk into context - enabling critical business decisions to be made in consideration of the key aspects of managing such significant risk.
- It sets a clear, repeatable and testable

Ian Travers will explain his thinking further in a webinar on 15 February. Sign up at <http://bit.ly/xqng2H>



The one day process safety leadership course provided an excellent platform to engage with our senior leadership team and develop common understanding of the subject. As a result of this engagement we have produced a set of short- and medium-term process safety improvement initiatives for our Teesside site facilities.
Daren Smith, Sabic UK Petrochemicals EHS director

standard for delivering training.

- It is drawn up by industry for industry with the regulator's endorsement and input.
- It is delivered by accredited training providers.

I truly consider this to be a groundbreaking piece of work. It fills a gap and is appropriate for all executive boards, no matter what size the company or where in the world they are located.

global governance for process safety

It's also worth keeping an eye on the Organisation for Economic Co-operation and Development (OECD), which is developing guidelines for corporate governance for process safety.

A team of international experts in process safety and leadership has 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.

A conference for senior executives will be held on 14-15 June 2012 in Paris to launch the guidelines and help industry leaders to recognise the issue and demonstrate their commitment to improving the current position. The conference is open to all CEOs and senior leaders of major hazard organisations – do you know if your boss is attending? (for further information, contact marie-chantal.huet@oecd.org).

how engineers can influence chief executives

As your company's process safety expert, you have a professional and moral responsibility to raise awareness of the importance of process safety. This involves making the effort to influence the board in a positive manner.

1. Present process safety risks as business risks rather than relying solely on complex technical arguments when speaking to senior leaders. For example, don't talk about the intricacies of the required safety integrity levels, instead outline the potential consequences of installing the wrong equipment.
2. Keep process safety on the agenda at all meetings, and offer to present process safety updates to senior management meetings. Avoid jargon!
3. Process safety management and business success in major hazard enterprises can't be separated. Help senior executives to understand the basics of process safety management and take business decisions in the light of the potential impact on safety.
4. Ensure that senior leaders understand that process safety risk management needs a systematic methodology based on several layers of protection, and that a one-size-fits-all approach in determining these protective barriers is not adequate. They need to be tailored to the risk profile of the activities being undertaken and cover people, plant and processes. For example, the protection needed at a plant manufacturing acid is different to those at a plant producing sugar. Both are important and the risk of getting either wrong have, in real life, proved catastrophic.
5. In simple terms describe the risk profile for your part of the business and highlight the most critical control measures – yes, they are all important but some more than others.
6. Explain that despite having expertise and diligence in risk assessment and design of protective measures, 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.
7. Make the case for focused process safety performance information being provided to the management team.
8. 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.
9. Show senior leaders the article *Educate your boss*.
10. Tell your most senior manager(s) about the availability of the course *Process Safety Leadership for Senior Executives*.



getting it right

Safe operation and sustainable business success cannot be separated. Failure in process safety management can never deliver good performance in the long term and the consequences of getting the control of major hazards wrong are extremely costly. Major incidents in recent years have shown that the consequences for capital costs, income, insurance costs, investment confidence and shareholder value can all be drastically affected. So why take the risk when getting it right pays large dividends?

Getting it right means starting from the boardroom and embedding a strong process

safety culture throughout an organisation. Boardroom decisions have a direct bearing on process safety outcomes and the board sets the vision and culture for the whole organisation. So, effective governance on process safety is essential for a sustainable business performance. **tce**

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CUT OUT AND KEEP