

Environmental management moves towards sustainability



Environmental management systems (EMS) are growing in importance. Impending changes to ISO 14001, plus new EU safety legislation affecting offshore operators, will force many companies and executives to make key decisions.

Jon Herbert reports.

ISO 14001 is undergoing a fundamental review. The international standard for developing and implementing environmental management systems (EMS) is being revised and realigned with the wider principles of sustainability. This could modify the approach that many businesses take to the way they operate.

There will be a series of radical changes. From mid-2015 onwards, the full life-cycle impacts of a project will become a primary consideration. Supply and value chain performance will be a key factor. Stakeholder interests and social responsibilities will move to centre stage. There will also be a definite push towards adaptation to climate change.

The evolving role of the EMS will be magnified still further for the energy industry by a new raft of European safety legislation that will also have far-reaching environmental implications.

Much of the responsibility for change will fall on senior management's shoulders. Executives have been identified as the people with the power to make the commitments and decisions needed to deepen and broaden environmental responsibility in a wide global context.

Many have often had a limited role in the operation of a company's EMS. Now their leadership skills will be called into play.

New environmental leadership

When ISO 14001: 2015 is introduced, senior managers will have a high-profile role that will be audited closely. They will be held directly accountable for success and their ability to demonstrate good environmental credentials. In effect, the revision represents a 'mind-set' change. This means that rather than simply working within the environment and limiting potential damage, companies will be encouraged to see themselves as an intrinsic part of the global environment.

However, with practical new responsibilities there will also be new practical business opportunities. As many companies are already proving, environmental efficiency creates bottom-line commercial benefits. Cutting energy-use, carbon, waste, pollution, social nuisance and adapting to climate change is sound business. Communities like good neighbours. These are also hallmarks of a successful EMS.

Evolving with the times

For the last decade, ISO 14001: 2004, has set the international standard for implementing and running a sound EMS and has defined the practical relationship between business and the environment. ISO 14001: 2015 will usher in not only a revised structure and common text to be shared with other global standards, but also a call for creative sustainable thinking well outside the historic corporate box. Pressures are growing elsewhere too.

The new EU Safety Directive will introduce its own environmental challenges. When the Council of the European Union adopted a new directive on the safety of offshore oil and gas operations in 2013, it voted for the introduction of a Directive designed to reduce major accidents relating to offshore oil and gas operations and to limit their consequences. This includes a requirement for all installations, including 'non-production' facilities such as drilling rigs, to operate an approved EMS.

Global recognition

Why is ISO 14001 so important? Some 300,000 organisations are now estimated to have used the standard worldwide. Whilst for many companies well-audited management credentials are not obligatory, an increasing number of clients and organisations insist on a full range of performance standards from suppliers and partners. There are valuable reputational and legal reasons for being able to demonstrate compliance too.

Putting an active EMS in place is also an active discovery process; involving the entire operational team is an effective way to understand real-time problems and solutions from real-time people. Far from being a bolt-on process, a good EMS should lead to fundamental company efficiencies.

The International Organisation for Standards (ISO) based in Geneva has identified several key areas for the current revision that at present is going through a rigorous series of international consultations, modifications and clarifications. Once introduced, there will be a three-year transformation time for existing systems; new systems must work to the new standard immediately.

New priorities for companies

A major development is that senior management will be expected to show a greater understanding of environmental issues, support their EMS and be strong advocates of improved performance and strategic decision-making. There have been concerns that senior managers are often detached from environmental management. Now, as company leaders, they will be asked to take firm control rather than depending upon a remote environmental management process.

Under the present regime, senior managers have strategic responsibilities to appoint an environmental manager and provide adequate resources. They set the scope, sign-off policy and review annual progress. In the interim, their role is often limited. It is usually left to the operational environmental manager and his or her team to identify the potential risks that operations and activities pose to the environment (aspects). They also work to assess the effects (impacts). The EMS then prioritises, creates and implements mitigating measures, monitors the results, creates documentation required during audit and presents results to senior management for annual review, change and reiteration.

From 2015, company leaders will become responsible for ensuring that environmental policy and aims are aligned to their organisation's strategic business journey. Internally, they will have to ensure that the EMS is integrated into core business processes. They will be responsible too for communicating the importance of effective environmental management.

Guaranteeing successful outcomes and promoting further continual improvement will also fall within their gamut. Auditors will be looking for specific evidence. There is also a new sustainable development reference to global stakeholder welfare and urgent need for climate change adaption at the centre of strategic business thinking.

The updated standard will also note a link between ISO 14001 and social responsibility principles (the 3Ps) – 'people, planet, profit'. Here, the environment is the planet. Preventing waste, pollution and emissions, using energy, water and materials sustainably, protecting natural habitats, ecosystems and biodiversity, plus control of urban and rural development, will be key factors.

The idea that a company's immediate product and service supply chain lies within a wider global resources and disposal value chain is also seen as an area for greater influence. An organisation's own EMS is inevitably shaped by its suppliers' performance. At the same time,

sustainability suggests that helping to share knowledge and good practise is a noble aim in itself.

The role of good design in reducing impacts during the life and end-of-life of products is seen as a powerful lever. Being able to show environmental compliance and use good performance indicators to track improvements is a key part of the revision.

European dimension

The evolving role of environmental planning and management will have specific implications for the energy sector. The RSK Group works internationally to help organisations achieve global business goals with minimal environmental and social impact. It worked with BP to implement the first EMS in the North Sea in 1997. As Managing Director of the environmental and engineering group's environment, health and safety business, Sarah Mogford is closely involved with environmental management onshore and offshore, with drilling companies, storage facilities and refineries. 'The purpose of an effective EMS is to prevent risks and secure business improvements,' she says.

She sees a combination of new EU safety legislation, a sharp focus on critical environmental equipment, ageing infrastructure and decommissioning as key areas where sensitive environmental management will soon be needed. She believes that environmental concerns must form part of a much broader business case.

Learning from hard experience

The EU Safety Directive aims to prevent a European equivalent of the 2010 Deepwater Horizon incident in the Gulf of Mexico. This is a senior management issue. 'Environmental management in the North Sea is now a mature process and most operators have a well-managed EMS in place,' says Mogford. However, the new directive will have direct implications for environmental management within drilling companies.

At present, they may simply have to comply with their client operator's EMS. In future, competent authorities responsible for the safety of installations will verify the provisions for safety, environmental protection, and emergency preparedness of rigs. It is worth noting that oil and gas companies will be fully liable for environmental damage caused to the protected marine species and natural habitats.

Safety cases, which are reviewed by the Health & Safety Executive and are mandatory for GB North Sea assets following the Piper Alpha explosion in 1988, will also require substantial

reworking. They examine all potentially catastrophic risks scenarios, such as those posed by fires, large waves, blow-outs and equipment failures, and set out in fine detail the emergency actions expected of a company and personnel.

Under the EU Safety Directive, safety cases will be reviewed and will include a new environmental dimension that could be applied retrospectively.

Ongoing challenges

Environmentally critical elements (ECE) are relevant to both new and mature North Sea installations. Following the 2005 Buncefield explosion at the Hertfordshire oil storage terminal, equipment and related systems where there is a major accident hazard have been subject to more robust definition of performance standard, inspection, testing and maintenance. The scope of such equipment and related systems covers safety and environmental impacts.

'Vigorous demands are again best seen as good common-sense business practice,' adds Warren Percival, RSK Director, Environment, Health and Safety. 'If a component such as a valve can cause a critical impact its failure rate must be examined, and operators must adhere to manufacturer's maintenance and inspection guidelines, to provide the necessary assurance that it will work correctly when called into service,' he says. Many companies do, but many don't, he believes. 'They must think strategically and embed management of ECEs into the way they work. Too many disasters can now be linked to key component failures.'

Decommissioning can pose environmental challenges. Mogford urges enlightened caution. Aspects and impacts change. Trying to predict requirements decades into the future can become crystal-ball gazing. 'Throughout a project or asset's life, it is important not to see environmental factors in isolation but as integral to the business environment. ISO 14001: 2015, new EU legislation and the age and criticality of infrastructure will pose significant challenges,' she says. 'Senior managers have a thousand calls on their time and may respond more readily to environmental management in terms of lower energy and fuel consumption or better resource utilisation.'

Percival believes that the effectiveness of ISO 14001: 2015 will also depend upon how tough auditors and certification bodies are prepared to be. 'Many currently focus on minor issues,' he says. 'From 2015, anyone who does not come up to scratch will find compliance hard. ISO 14001: 2015 is less about the standard and more about the system.' ●