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THE FUTURE OF CHANGE MANAGEMENT

Process safety management (PSM) has matured during the past 15 years. Yet many opportunities still exist for continuous improvement in design and operation that promise even more effective management systems in the future. Management of change (MOC) remains one of the most important PSM elements – and one of the most difficult to implement and keep healthy. Many companies operate MOC systems for a variety of non-process safety reasons. The authors hope that this book will stimulate management's thinking about effective ways to improve an organization's MOC activities.

Experience is a powerful teacher; yet the painful lessons learned from watershed events are all too quickly forgotten. Recent learnings have shown that gaps can occur in MOC system implementation because the pressures of everyday business can overwhelm the lessons of history. Future MOC systems should be designed to be more fault tolerant and to have effective, built-in redundancy. Facilities should adopt practices that nurture a safety culture. Management should maintain process safety competency and resolve the "loss of corporate memory" prevalent in industry, which can hamper proper MOC system operation.

Supervision and workforces alike should embrace operating discipline as an essential feature of improving and securing human performance. Metrics should be used to realize the highest return on every process safety resource invested in MOC, and management should commit to periodically reviewing the MOC system in order to make continuous improvement real, not just a slogan.

Layered, effective MOC system control functions (using metrics, management review, and audits) should be viewed as management tools for organizational learning, as originally intended, not for placing blame.

The business case for process safety and MOC system implementation should be established so that safety, health, and environmental issues can be managed in the same manner as sales, raw materials, inventories, and capital. MOC practices should pervade company operations throughout the life cycle of equipment, processes, and sites. MOC practices should be adopted by ALL industries that manufacture or use hazardous chemicals or energy, and their use should become standard practice.

Recognizing that "good things happen through planning, while bad things happen all by themselves," the process safety community should apply one of its strongest diagnostic tools – root cause analysis – to its broken or underperforming MOC processes, procedures, and practices. Just as a root cause analysis related to an incident investigation seeks to identify specific management system root causes, an MOC root cause analysis should look for system-wide management issues. In addition to supporting incident investigations, root cause analysis should be used for evaluating undesired MOC outcomes and addressing MOC performance and efficiency problems.

MOC tools need to improve so that non-experts can competently use them. Companies and facilities should develop expert systems to assist with real-time MOC risk decisions. The Center for Chemical Process Safety's PSM Web community should grow, affording seamless virtual connectivity between workforces, facilities, companies, industries, and countries. This would allow everyone to benefit from lessons learned and to benchmark MOC practices in real time. MOC systems should be fully electronic, with work flow tools for communicating, controlling, and managing MOC effectiveness (even integrated with distributed process control networks).

Table 7.1 lists some areas in which change management may evolve during the next decade.

TABLE 7.1. Possible MOC Growth Areas

- Totally electronic MOC systems
- MOC systems that dovetail so perfectly with hazard/risk studies that MOC reviews will automatically update the current version of the site PHA or risk study
- Expert system tools to aid MOC reviewers in evaluating the risk of a proposed change
- Management of newly recognized important sources of change (e.g., culture or organization)
- MOC systems that are operated "virtually" from distant corporate locations where the necessary MOC hazard review resources are available
- MOC systems at various geographical locations that are interconnected to allow sharing of MOC experiences and harmonizing of changes in similar site processes
- MOC systems that communicate among different companies in order to share new hazard/risk information and lessons learned
- MOC systems that dovetail with regulatory compliance submittal software that will automatically update resubmissions (e.g., risk management plans)
- MOC systems that address changes triggered by outside sources
- Fully integrated PSM work flow systems, including MOC
- Expansion in the technical areas in which MOC is implemented, and integration of all MOC systems (e.g., process safety quality, environmental, security
- More prevalent self-auditing and management reviews
- Integration with work order and purchasing systems
- More interaction with suppliers and customers
- Measures for tracking continuous improvement of MOC