MANAGING CHANGE

Introduction

Effective management of change is a critical to preventing or controlling property loss. Some changes directly affect an organisation, for example, new construction, a new equipment installation, process changes, storage arrangement and commodity classification changes, etc. Other changes are indirect, for example, changing market conditions, changing regulations, recognition of new hazards, etc. Although most changes are made with positive intent, changes can increase the severity or frequency of property loss. Whenever change is contemplated the increased loss potentials need to be evaluated and addressed.

The concept of change management has been a critical part of the risk management philosophy in the petroleum, chemical and nuclear power industries for decades due to the severe hazards present. However, other businesses also present challenges with respect to managing change. There may not be dedicated process safety or loss prevention staff and project reviews may often be performed by a single plant engineer, operations manager or maintenance manager. Additionally, many tasks are outsourced to outside contractors who do not have a vested interest in the facility. Losses resulting from an improperly managed change can be devastating for all businesses.

Loss Examples

An explosion occurred at a gas plant at Longford, Victoria, Australia. The explosion killed two workers, injured eight others and resulted in interruption to Melbourne's natural gas supply for two weeks. This loss cost offshore property insurers in excess of £270M. The direct cause of loss was cold metal embrittlement in a heat exchanger that manifested itself after a process upset.

A Royal Commission investigation concluded that corporate management of change standards were not followed with respect to plant interconnections, equipment modifications and staffing changes, which all contributed to the conditions that allowed this loss to occur.

Develop a Procedure

Establish and implement written procedures to manage change. The procedures should be flexible enough to accommodate major, minor and temporary changes as well as emergency repairs and should be tailored to the size and complexity of your organisation. Include the following:

- Define the physical areas, processes, equipment, procedures and job functions that are of concern.
- Identify the most likely changes in advance and plan for them.
- Define benign changes, minor modifications and replacement in kind activities that are either outside the scope of the procedure, or that require a simplified review process.
- Define specific requirements for emergency repairs.

- Define the roles and responsibilities of individuals and departments that are required to participate in the change management process.
- Define specific requirements for monitoring employees and outside contractors that are involved with implementing changes.
- Establish a “Request-For-Change” (RFC) procedure that clearly states which reviews and approvals are needed before specific types of changes may be implemented.
- Form a dedicated project management group that will be responsible for initial screening, gathering feedback, validating action points and following changes through completion.
- List outside parties that are to be involved in the review process (i.e. property insurers, fire departments, etc.)
- Train personnel who will be involved in implementing changes. Include equipment operators and maintenance personnel.
- Integrate the process into the organisation
- Periodically review and update the procedures based on experience

Process

This process below can be modified based on the size, complexity and hazards present:

- Prepare a Request-For-Change (RFC) form and submit it to Project Management.
- Project Management will review the form and determine the appropriate review process per the written procedures. They will submit the RFC to the appropriate individuals, committees, departments and outside agencies or return it to the originator with explanatory comments if no action is required.
- Those allocated the task of reviewing the RFC will conduct their review, identify potential hazards and develop loss scenarios with consideration to the effect on upstream and downstream processes, operations, customers and vendors. Document important conclusions, recommendations and thought process and formally reply to Project Management.
- Project Management will coordinate and review the feedback, validate the action points and seek management approval for authorising any changes required.
- Project Management will communicate required changes to those responsible for implementing them and will follow-up as required to ensure that all issues are addressed. This step could involve a re-review and approval of plan revisions, routine inspections, progress meetings, or involving those with specific expertise as required.
- After completion Project Management will document that all action points have been addressed and file completed documentation for future reference.

Checklist

Use or modify the checklist below to assist with the review process:

- Work methods safe?
- Ignition sources controlled?
- Suitable location?
- Suitable construction materials?
- Material Safety Data Sheets available?
- Adequate and reliable fire protection?
- Explosion prevention measures taken?
- Adequate alarms and response?

- Required safety interlocks?
- Instrumentation and controls satisfactory?
- Adequate pressure relief devices and flame arresters?
- Chemical reactions controlled?
- Inert gas and purge requirements met?
- Adequate fireproofing of metal supports and critical control systems?
- Suitable electrical equipment for hazardous locations?
- Electrical grounding provided?
- Corrosion control measures taken?
- Satisfactory piping and equipment identification & labelling?
- Adequate spill control systems?
- Adequate ventilation systems?
- Inspection, maintenance and testing considered?
- Operator training and procedures satisfactory?

