TECH TALK
Volume 14

ALLIANZ GLOBAL CORPORATE & SPECIALTY®

MANAGING CHANGE

ALLIANZ RISK CONSULTING

INTRODUCTION

Changes are a challenge to any organization and change management as an organizational process is aimed to help stakeholders to accept and embrace changes in their business environment. Property insurers and safety specialists have yet another view on change management - the root cause of many accidents and losses is uncontrolled change. Leaving aside sabotage and other malicious acts, most industrial facilities are designed and operated to be safe, yet incidents continue to occur. The safety designed into the original process can be jeopardized by inadequate modification schemes, resulting in unsafe conditions.

The concept of change management (in the sense of maintaining plant safety when changes occur) 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, property losses are not limited to these industries and the non-chemical industry is equally challenged to safely manage changes.

WHAT IS A MANAGEMENT OF CHANGE (MOC) SYSTEM?

A management of change system helps to ensure that hazards associated with a change are identified and controlled. Where changes are undertaken in an unstructured way, new hazards may not be recognized and the increase in risk unnoticed. Hazards and risk can relate to assets and to an increased potential for an interruption to operation continuity. A formal MOC system consists of administrative procedures that mandate review and approval of proposed changes in an organization.

From a property insurance point of view, changes can occur in:

- Building structures (e.g. size, fire partitions, layout, height, design loads, design for natural hazards, fire resistance, etc.)
- Machinery & equipment (e.g. physical hazards, effect on the business interruption potential, replacement, repairs, etc.)

Allianz

- Materials (e.g. fire / explosion hazards of raw materials, finished products, packaging materials, etc.)
- Operations (e.g. shift pattern, downsizing personnel, attrition, facility shut-downs, use of contractors, new construction work in existing buildings, change of suppliers, modification of standard operating procedures, etc.)
- Maintenance or supporting functions (e.g. maintenance, inspection & testing, security, IT, etc.)

Changes can be *temporary*, such as temporary piping connections, transient storage, etc., or *permanent*, such as a complete replacement. Changes can be of the replacement in kind type, minor or major.

EXAMPLES

The following table shows some examples of changes, which may affect or compromise the safety concept of a facility. While our foctus is on property loss prevention and control, changes may also affect health, safety & environmental (HSE) concerns, which need to be considered.

CHANGE	POSSIBLE IMPACT
Building addition	Choice of insulation material may change combustibility of building
Building renovation	Existing fire divisions may be compromised
Installing new equipment	Increase of fire/explosion hazard; existing fire protection systems may not be designed for this type of hazard
Storing new product in distribution warehouse	Existing fire protection systems may not be designed for this new commodity
Change of packaging material or type of pallet used	Possible change of commodity classification of the stored goods, resulting in inadequate fire protection systems
New raw material	Different fire and explosion behavior, such as combustible dusts, flammable liquids, thermally unstable materials, incompatibility of materials, etc.
Change of supplier	Dependency on single source supplier
Employee attrition	Loss of vital experience in a team

Often, protection can be provided after implementation of a change if the change is noticed. However, some poorly managed changes have resulted in catastrophic accidents, such as improperly installed temporary piping connections or using incompatible materials.

RECOGNIZING AND MANAGING CHANGES

The most obvious changes occur when new buildings or processes are added. The more subtle changes occur when new materials are introduced, new suppliers are hired, procedures are modified, changes in facility staffing, maintenance cost is reduced, equipment is repaired or replaced, etc.

The first challenge is to identify changes before they are implemented. It is then important to determine if the planned change is a significant change, which needs to be carefully evaluated and managed, or a minor change, that has no further impact on a site's overall loss control / safety concept.

Once identified as significant, the potential changes can be evaluated whether the change:

- Introduces unforeseen new hazards
- Increases the risk associated with a known hazard
- Weakens or eliminates an existing management system
- Increases the vulnerability to business interruption

DEVELOP A PROCEDURE

To manage proposed changes, a systematic procedure should be established and implemented:

- Define the scope and all processes, procedures, physical areas and equipment to be covered by the management of change system.
- Define categories of changes and the steps that will be necessary to implement for each category (e.g. reviews, approvals, etc.). Minor changes or replacement in kind type of changes will require no or less review than complex, major changes. The procedure should clearly state which reviews are needed before specific types of changes may be implemented. The procedures are also referred to as "full MOC" or "shortened MOC."
- Define the roles and responsibilities for the review and approval process.
- Develop a method for reviewing and evaluating changes, from initial screening to hazard studies, depending on the complexity. Adaptive approaches can be used.

- Ensure affected documentation is updated before the change process is closed.

The MOC system should be integrated with existing site procedures and require appropriate training and auditing. Part of the procedure should be to establish communication between management and Allianz Risk Consulting before significant changes are implemented.

CHANGE MANAGEMENT FORM

A "Change Management Form", also referred to as a "Modification Approval Form" or "Request for Change Form", should include the following:

- Description of the proposed change
- Reason for the proposed change
- Affected area / processes / utilities of a site
- Affected drawings (if applicable)
- Departments / personnel to be consulted
- Preliminary hazard assessment
- Action Items
- Approval

For most sites, working with a "hazard prompt sheet" may be the most suitable approach. In an initial screening process, the proposed change is categorized according to the areas affected. The following list shows an example on how to categorize changes:

- Buildings
- Machinery & Equipment
- Materials
- Processes
- Procedures
- Organizational

Depending on the type of change, additional questions will be prompted. Also, the initial choice can determine who needs to be involved in the process and can approve the change.

For example, if the proposed change is a new raw material, "materials" would be selected and typical additional questions would ask for the material safety data sheet for evaluation of fire and explosion hazards (such as flash point, conductivity or dust explosion potential), evaluation of reactivity hazards, health & safety and environmental impact, etc. Once the hazards have been identified, the required safeguards and fire/explosion protection can be determined, or it may be decided not to use this raw material, if this is an option.

ARC POSITION

Any industrial facility will benefit from a formal management of change system. Such a system will help to avoid unrecognized hazards that could jeopardize existing protection concepts. The MOC should tie into existing management systems and be adapted in scope and depth to the type and size of facility. Before implementation, changes should also be communicated to Allianz Risk Consulting where appropriate.

QUESTIONS OR COMMENTS?

Please contact:

Christine Höfflin
Senior Risk Consultant
Allianz Risk Consulting Germany
+49 761 503 6766
christine.hoefflin@allianz.com
www.agcs.allianz.com

Reference TT 14/19/04

Tech Talk is a technical document developed by ARC to assist our clients in property loss prevention. ARC has an extensive global network of more than 100 property risk engineers that offers tailor made, customer focused risk engineering solutions.

Design: Graphic Design Centre