



GUIDELINES FOR THE MANAGEMENT OF CHANGE FOR PROCESS SAFETY

Center for Chemical Process Safety
New York, New York

CCPS
CENTER FOR
CHEMICAL PROCESS SAFETY
An **AIChE** Industry
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MANAGEMENT OF CHANGE
FOR PROCESS SAFETY**

This book is one in a series of process safety guideline and concept books published by the Center for Chemical Process Safety (CCPS). Please go to www.wiley.com/go/ccps for a full list of titles in this series.

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Guidelines for Management of Change for Process Safety
is dedicated to the memory of

Sanford Schreiber
1925 – 2007

Sandy Schreiber joined CCPS in 1986 after a 28-year career with Allied-Signal, where he was Director of Corporate Safety and Loss Prevention. Sandy's early development of the twelve technical elements that must be part of any chemical process safety management program was a ground-breaking concept. These elements were published in *A Challenge to Commitment* and set CCPS on a path of influence and success. The subsequent development of the 4-volume series of process safety management guidelines, leading to the recent book, *Guidelines for Risk Based Process Safety*, owes a debt to Sandy's vision.

We have lost a good friend, and the industry has lost a pioneer.

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PREFACE

The American Institute of Chemical Engineers (AIChE) has been closely involved with process safety and loss control issues in the chemical and allied industries for more than four decades. Through its strong ties with process designers, constructors, operators, safety professionals, and members of academia, AIChE has enhanced communications and fostered continuous improvement of the industry's high safety standards. AIChE publications and symposia have become information resources for those devoted to process safety and environmental protection.

AIChE created the Center for Chemical Process Safety (CCPS) in 1985 after the chemical disasters in Mexico City, Mexico, and Bhopal, India. The CCPS is chartered with developing and disseminating technical information for use in the prevention of major chemical accidents. The center is supported by more than 100 sponsors within the chemical process industry who provide the necessary funding and professional guidance to its technical committees. The major product of CCPS activities has been a series of guidelines to assist those implementing various elements of a process safety and risk management system. This book is part of that series.

Uncontrolled changes have directly caused or contributed to many major accidents that have occurred within the chemical process industry and allied industries. Many industries and companies recognize the importance of careful management of change (MOC) for ensuring the safety of process operations and the quality of manufactured goods. The concept and the need to properly manage change are not new; many companies have implemented MOC systems. Yet incidents and near misses attributable to inadequate MOC systems, or to subtle, previously unrecognized sources of change (e.g., organizational changes), continue to occur. To improve the performance of MOC systems throughout industry, managers need advice on how to better institutionalize MOC systems within their companies and facilities and to adapt such systems to managing non-traditional sources of change. CCPS is helping to fulfill this need through the publication of these guidelines.

The purpose of this book is to define the important features of MOC systems. MOC systems help ensure that changes to the design, operation, maintenance, and organization of facilities will not adversely affect employees, the public, or the environment. MOC systems are used not only for process safety purposes, but also to manage quality, security, environmental, and organizational risk issues. This document outlines a process that can be used for designing, developing, installing, operating, maintaining, and improving MOC systems at individual company sites and at corporate or support locations. The appendices contain examples, flowcharts, and forms that should be useful to personnel who are implementing new MOC systems or improving existing ones. The enclosed CD contains an MOC system design tool, an MOC system diagnostic tool, and examples of typical MOC system procedures and forms.

The hazards associated with a proposed change are not limited by the size or complexity of the facility in which the proposed change is to be implemented. Thus, just because a facility may be small or have relatively simple processes (e.g., storage and unloading), the need to properly manage change is no less important than at larger or more complex facilities. Also, managing change at small facilities is not necessarily easier than implementing an MOC system at a large facility. Each situation carries its own special challenges. Large facilities, where making adjustments to the facility culture is often more difficult, can find that gaining consensus on the procedures for managing change is equally difficult. Smaller facilities, which are often more receptive to change, may lack the resources (e.g., people, technical specialties) that are more common at large companies/facilities. To help meet the needs of smaller facilities, this book includes an overview of the MOC chapter from the CCPS book entitled *Guidelines for Risk Based Process Safety*, which promotes the efficient design, implementation, and improvement of “just fit-for-duty” management systems, including MOC.

This book is intended for an audience ranging from facility and corporate managers of process safety to workers who have differing levels of knowledge about the principles of safely managing change. This book is primarily designed to equip people responsible for MOC systems with new ideas for implementing and improving MOC systems. However, it may also be used as a training aid for companies teaching process safety management and MOC concepts to new employees.

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ITEMS ON THE CD ACCOMPANYING THESE GUIDELINES

MOC System Design Tool (Excel Spreadsheet)

MOC System Diagnostic Tool (Excel Spreadsheet)

Example MOC System Procedure and Forms

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