Guidance on meeting expectations of
EI *Process safety management framework*

Element 17: Work control, permit control and task risk management

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GUIDANCE ON MEETING EXPECTATIONS OF EI PROCESS SAFETY MANAGEMENT FRAMEWORK

ELEMENT 17: WORK CONTROL, PERMIT TO WORK AND TASK RISK MANAGEMENT

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FOREWORD

Process safety management (PSM) is vital to ensuring safe and continued operations in major accident hazard (MAH) organisations. However, PSM is a multifaceted process, and a number of high profile incidents since 2005 have suggested that without a holistic understanding of the various factors required for effective PSM it can be difficult and inefficient to ensure, and measure, performance.

In 2010 the Energy Institute (EI) published *High level framework for process safety management* (*PSM framework*), which aimed to define what PSM should involve. Divided into four focus areas (process safety leadership, risk identification and assessment, risk management, and review and improvement) and sub-divided into 20 'elements', it sets out a framework of activities MAH organisations should undertake to ensure PSM. Each element lists a number of high level activities organisations should meet (expectations).

EI *Process safety management guidelines* is a series of 20 publications ('guidelines') that build on the PSM framework. Commissioned by the EI Process Safety Committee (PSC) each guideline captures and presents current industry good practices and guidance on how organisations can meet the expectations set out in each element of the *PSM framework*. Each guideline includes:

- a logical flow diagram of activities (steps) the organisation should undertake to manage that element;
- descriptions of those steps;
- example performance measures (PMs) to measure the extent to which key steps have been undertaken;
- a list of further resources to help undertake key steps;
- a table mapping the steps against the expectations in the *PSM framework*, and
- annexes of useful information.

Readers implementing the guidance in this publication should be aware of the *PSM framework* and the other publications in this series, particularly if they are a manager with oversight of the wider implementation of PSM.

Suggested revisions are invited and should be submitted through the

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1 INTRODUCTION

1.1 WORK CONTROL, PERMIT CONTROL AND TASK RISK MANAGEMENT

This guideline sets out good practices for work control, permit to work, task risk management and the management of HS&E and process safety risks introduced into the business by the execution of maintenance or construction work. This guidance will address:

– Identification, assessment and management of risks arising from maintenance and project work.
– Development of appropriate permit to work arrangements

The execution of maintenance and project work activities, if not appropriately managed, can significantly increase the levels of HS&E and process safety risk.

Management must ensure that effective work control, permit to work and task risk management arrangements are in place, and followed, to control the risks arising from work activities.

1.2 EXPECTATIONS FOR ELEMENT 17: WORK CONTROL, PERMIT CONTROL AND TASK RISK MANAGEMENT

Element 17 of EI *High level framework for process safety management* ('*PSM framework*') describes 11 expectations – arrangements and processes that organisations should (to an appropriate degree) have in place in order to ensure they are managing this aspect of PSM appropriately:

'Overview The execution of maintenance and project work activities, if not appropriately managed, can significantly increase the levels of HS&E and process safety risk.
Management must ensure that effective work control, permit to work and task risk management arrangements are in place, and followed, to control the risks arising from work activities.

17.1 Appropriate work control and permit-to-work arrangements, proportionate to the risk, are employed to assure the safety of personnel, plant, process and the integrity of the asset during work activities.

17.2 Key stages in the work control arrangements are reviewed and approved by specified levels of management.

17.3 Permit-to-work systems, proportionate to the risk, are employed to ensure both the safety of personnel and the integrity of the asset during maintenance or project work activities.

17.4 There are procedures that ensure that HS&E and process safety risks arising from work tasks are systematically identified and assessed, before work starts and as circumstances change and where new risks arise during execution of work.

17.5 Risk control measures are identified and implemented to manage the identified risks to a tolerable level.

17.6 Task risk assessments consider risk to:
- health and safety of employees, contractors and members of the public;
- process safety;
- environment;
- reputation, and
- business interruption.

17.7 Completed task risk assessments are reviewed and approved by specified named competent individuals appropriate to the magnitude of the risk and any decisions are clearly documented.

17.8 All of the workgroup are made aware of task risk assessments and required control measures, process and results.

17.9 Adequate numbers of competent personnel are available to carry out the required work control, permit-to-work and task risk management arrangements.

17.10 Arrangements for work control, permit-to-work and task risk management are understood and followed; understanding of arrangements and compliance with them is regularly tested.

17.11 Compliance and performance trends are reviewed by specified levels of management.'

This guideline provides a process, along with guidance, to help organisations meet these expectations. It also suggests a number of compliance checks and performance measures (PMs) to measure the extent to which key activities involved in meeting these expectations have been or are being undertaken.