

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

Element 9: Process and operational status  
monitoring, and handover

GUIDANCE ON MEETING EXPECTATIONS OF  
EI PROCESS SAFETY MANAGEMENT FRAMEWORK ELEMENT 9:  
PROCESS AND OPERATIONAL STATUS MONITORING, AND HANDOVER

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## PUBLICATIONS IN THIS SERIES

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

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- *Element 2: Identification and compliance with legislation and industry standards*
- *Element 3: Employee selection, placement and competency, and health assurance*
- *Element 4: Workforce involvement*
- *Element 5: Communication with stakeholders*
- *Element 6: Hazard identification and risk assessment*
- *Element 7: Documentation, records and knowledge management*
- *Element 8: Operating manuals and procedures*
- *Element 9: Process and operational status monitoring, and handover*
- *Element 10: Management of operational interfaces*
- *Element 11: Standards and practices*
- *Element 12: Management of change and project management*
- *Element 13: Operational readiness and process start-up*
- *Element 14: Emergency preparedness*
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- *Element 17: Work control, permit to work and task risk management*
- *Element 18: Contractor and supplier, selection and management*
- *Element 19: Incident reporting and investigation*
- *Element 20: Audit, assurance, management review and intervention*

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

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# 1 INTRODUCTION

## 1.1 PROCESS AND OPERATIONAL STATUS MONITORING, AND HANDOVER

This guideline sets out good practice in establishing the necessary process and operational status monitoring to ensure that key aspects of the organisation's operations are appropriately monitored on a day-to-day or continuous basis. It also sets out good practice for establishing appropriate handover arrangements between shift crews and work groups.

Comprehensive process and operational status monitoring and effective handover between work groups are essential to assure the continued integrity of the organisation's operations. Management should ensure that the process and operational status monitoring, and handover requirements, are defined, understood and carried out.

## 1.2 EXPECTATIONS FOR ELEMENT 9: PROCESS AND OPERATIONAL STATUS MONITORING, AND HANDOVER

Element 9 of EI *High level framework for process safety management (PSM framework)* describes eight expectations – arrangements and processes that organisations should (to an appropriate degree) have in place in order to ensure they are managing this aspect of process safety management (PSM) appropriately:

'Overview: Comprehensive process and operational status monitoring and effective handover between work groups is essential to assure the continued integrity of the organisation's operations.  
Management must ensure that the process and operational status monitoring, and handover requirements are defined, understood and carried out.

- 9.1** Safe operating limits (SOLs) are defined for all assets, commensurate with risk.
- 9.2** There are procedures to ensure that SOLs are regularly reviewed and kept up to date as living systems.
- 9.3** Operating parameters are systematically monitored vs. SOLs.
- 9.4** Excursions beyond safe operating envelope (SOEs) are identified and followed up.
- 9.5** Arrangement for SOLs and their significance are understood and monitoring requirements are followed; understanding of arrangements and compliance with them is regularly tested.
- 9.6** Handover arrangements are defined, understood and implemented commensurate with risk, covering handovers such as:
  - operational and maintenance shift handover;
  - successive work groups, and
  - job positions (one to another).



- 9.7** Arrangements for process and operational status monitoring, and handover are understood and followed; understanding of arrangements and compliance with them is regularly tested.
- 9.8** 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.