

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

Element 7: Documentation, records and knowledge  
management

GUIDANCE ON MEETING EXPECTATIONS OF  
EI PROCESS SAFETY MANAGEMENT FRAMEWORK

ELEMENT 7: DOCUMENTATION, RECORDS AND KNOWLEDGE MANAGEMENT

1st edition

February 2014

Published by

**ENERGY INSTITUTE, LONDON**

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Registered charity number 1097899

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This publication has been produced as a result of work carried out within the Technical Team of the EI, funded by the EI's Technical Partners. The EI's Technical Work Programme provides industry with cost-effective, value-adding knowledge on key current and future issues affecting those operating in the energy sector, both in the UK and internationally.

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The EI gratefully acknowledges the financial contributions towards the scientific and technical programme from the following companies

BG Group	Premier Oil
BP Exploration Operating Co Ltd	RWE npower
BP Oil UK Ltd	Saudi Aramco
Centrica	Scottish Power
Chevron	SGS
ConocoPhillips Ltd	Shell UK Oil Products Limited
Dana Petroleum	Shell U.K. Exploration and Production Ltd
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Kuwait Petroleum International Ltd	Tullow
Maersk Oil North Sea UK Limited	Valero
Murco Petroleum Ltd	Vattenfall
Nexen	World Fuel Services
Phillips 66	

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ISBN 978 0 85293 667 2

Published by the Energy Institute

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## **PUBLICATIONS IN THIS SERIES**

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

- *Element 1: Leadership, commitment and responsibility*
- *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*
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- *Element 13: Operational readiness and process start-up*
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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*.
- 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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Suggested revisions are invited and should be submitted through the Technical Department, Energy Institute, 61 New Cavendish Street, London, W1G 7AR. e: [technical@energyinst.org](mailto:technical@energyinst.org)

## ACKNOWLEDGEMENTS

*EI Guidance on meeting expectations of EI Process safety management framework* was commissioned by the Energy Institute (EI) Process Safety Committee (PSC) and prepared by Martin Ball (Bossiney Consulting). During this project, PSC members included:

Martin Ball	Bossiney Consulting
David Bleakley	ConocoPhillips
John Brazendale	Health and Safety Executive
John Briggs	Kuwait Petroleum International
Jonathan Carter	Marsh
James Coull	Total
Kenny Crighton	Nexen
Peter Davidson	UKPIA
Graeme Ellis	ABB
Dr David Firth	Chilworth Group
Peter Gedge (Chair)	BP
John Henderson	CB&I Lummus (BCECA)
Bob Kilford	EDF Energy
King Lee (Vice-Chair)	Lloyd's Register
Keith Lewis	Total E&P UK Ltd
Paul McCulloch	E.ON
SreeRaj Nair	Chevron
Peter O'Toole	Tullow Oil
John Pond	Consultant
Dr Niall Ramsden	Resource Protection International
Toby St.Leger	ConocoPhillips
Dr Mark Scanlon (Secretary)	Energy Institute
Don Smith	Eni UK

The following additional individuals are acknowledged for commenting on the drafts for consultation of this series of publications:

Lee Allford	European Process Safety Centre
Mike Beanland	ABB
Amanda Cockton	Health and Safety Executive
Edwin Ebiegbe	Perenco
Allan Ormond	ABB

Technical editing was carried out by Stuart King (EI).

Affiliations are correct at the time of contribution.

# 1 INTRODUCTION

## 1.1 DOCUMENTATION, RECORDS AND KNOWLEDGE MANAGEMENT

This guideline sets out good practices for developing and maintaining the required documentation, records and process knowledge for effective process safety management (PSM). Accurate records and information are essential to identify, assess and manage health, safety and environment (HS&E) and process safety risk.

Management should ensure that the information required to support safe operation is identified, available and up to date.

## 1.2 EXPECTATIONS FOR ELEMENT 7: DOCUMENTATION, RECORDS AND KNOWLEDGE MANAGEMENT

Element 7 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 appropriately managing this aspect of PSM:

- 'Overview      Accurate records and information are essential to identify, assess and manage HS&E and process safety risk.  
Management must ensure that the information required to support safe operation is identified, available and up to date.
- 7.1**            There are procedures to define, develop and maintain the required documentation and records necessary to support robust operation and maintenance of facilities.
- 7.2**            Documentation and records are readily available to those who need to use them.
- 7.3**            Documentation and records including those kept electronically are appropriately safeguarded.
- 7.4**            There are procedures to ensure that documentation and records are regularly reviewed and kept up to date as living systems.
- 7.5**            A retention policy is defined for all documentation and records.
- 7.6**            The required documentation and records include those generated to meet the requirements of all other EI *PSM framework* expectations, such as:
- process design considerations and basis for safe operation;
  - drawings;
  - asset register;
  - equipment records (inspection, testing, maintenance and modification);
  - equipment specification data;
  - workplace inspection records;



- work logs;
- training and competency records;
- incident investigation reports;
- occupational health records;
- operating procedures;
- environmental authorisations;
- planning consents;
- relevant legislation;
- risk assessments;
- standards and practices;
- hazards of materials involved in operations, and
- product data sheets.

**7.7** Arrangements for documentation, records and knowledge management are understood and followed; understanding of arrangements and compliance with them is regularly tested.

**7.8** 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.