

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

Element 1: Leadership, commitment and responsibility

GUIDANCE ON MEETING EXPECTATIONS OF
EI PROCESS SAFETY MANAGEMENT FRAMEWORK ELEMENT 1:
LEADERSHIP, COMMITMENT AND RESPONSIBILITY

1st edition

October 2013

Published by

ENERGY INSTITUTE, LONDON

The Energy Institute is a professional membership body incorporated by Royal Charter 2003

Registered charity number 1097899

The Energy Institute (EI) is the chartered professional membership body for the energy industry, supporting over 16 000 individuals working in or studying energy and 250 energy companies worldwide. The EI provides learning and networking opportunities to support professional development, as well as professional recognition and technical and scientific knowledge resources on energy in all its forms and applications.

The EI's purpose is to develop and disseminate knowledge, skills and good practice towards a safe, secure and sustainable energy system. In fulfilling this mission, the EI addresses the depth and breadth of the energy sector, from fuels and fuels distribution to health and safety, sustainability and the environment. It also informs policy by providing a platform for debate and scientifically-sound information on energy issues.

The EI is licensed by:

- the Engineering Council to award Chartered, Incorporated and Engineering Technician status;
- the Science Council to award Chartered Scientist status, and
- the Society for the Environment to award Chartered Environmentalist status.

It also offers its own Chartered Energy Engineer, Chartered Petroleum Engineer and Chartered Energy Manager titles.

A registered charity, the EI serves society with independence, professionalism and a wealth of expertise in all energy matters.

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.

For further information, please visit <http://www.energyinst.org>

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
Dong Energy	Shell U.K. Exploration and Production Ltd
EDF Energy	SSE
ENI	Statkraft
E. ON UK	Statoil
ExxonMobil International Ltd	Talisman Energy (UK) Ltd
International Power	Total E&P UK Limited
Kuwait Petroleum International Ltd	Total UK Limited
Maersk Oil North Sea UK Limited	Tullow
Murco Petroleum Ltd	Valero
Nexen	Vattenfall
Phillips 66	World Fuel Services

However, it should be noted that the above organisations have not all been directly involved in the development of this publication, nor do they necessarily endorse its content.

Copyright © 2013 by the Energy Institute, London.

The Energy Institute is a professional membership body incorporated by Royal Charter 2003.

Registered charity number 1097899, England

All rights reserved

No part of this book may be reproduced by any means, or transmitted or translated into a machine language without the written permission of the publisher.

ISBN 978 0 85293 656 6

Published by the Energy Institute

The information contained in this publication is provided for general information purposes only. Whilst the Energy Institute and the contributors have applied reasonable care in developing this publication, no representations or warranties, express or implied, are made by the Energy Institute or any of the contributors concerning the applicability, suitability, accuracy or completeness of the information contained herein and the Energy Institute and the contributors accept no responsibility whatsoever for the use of this information. Neither the Energy Institute nor any of the contributors shall be liable in any way for any liability, loss, cost or damage incurred as a result of the receipt or use of the information contained herein.

Further copies can be obtained from: Portland Customer Services, Commerce Way, Whitehall Industrial Estate, Colchester CO2 8HP, UK.
t: +44 (0)1206 796 351 e: sales@portland-services.com

Electronic access to EI and IP publications is available via our website, www.energypublishing.org.

Documents can be purchased online as downloadable pdfs or on an annual subscription for single users and companies.

For more information, contact the EI Publications Team.

e: pubs@energyinst.org

CONTENTS

	Page
Publications in this series	4
Foreword	5
Acknowledgements	6
1 Introduction	7
1.1 Leadership, commitment and responsibility	7
1.2 Expectations for element 1: Leadership, commitment and responsibility	7
2 Arrangements for meeting expectations	10
2.1 Descriptions of actions for each step in the logical flow diagram	12
3 Suggested compliance checks and performance measures	30
3.1 Performance measure 1: Element compliance and implementation status (EIPSS rating)	32
3.2 Performance measure 2: Implementation of management system	33
3.3 Performance measure 3: Management system compliance benchmarking	35
3.4 Performance measure 4: Development of performance targets, objectives and action plans	37
3.5 Performance measure 5: Action plan implementation status	39
3.6 Performance measure 6: Governance meetings overdue	40
3.7 Performance measure 7: Governance meetings effectiveness	41
3.8 Performance measure 8: Workplace discussions overdue	43
3.9 Performance measure 9: Governance meetings and workplace discussions – issues arising	44
3.10 Performance measure 10: Governance meetings and workplace discussions – overdue follow-up actions	46
3.11 Performance measure 11: Policy statements overdue for review	47
3.12 Performance measure 12: Employee opinion survey	48
3.13 Performance measure 13: Incident root causes which are failures of element 1	49
 Annexes	
Annex A References and bibliography	50
A.1 References	50
A.2 Further resources	50
Annex B Glossary of acronyms and abbreviations	52
Annex C Mapping of steps to EI PSM framework	53
Annex D Example report template: Management and supervisory field observation	56
Annex E Rating the effectiveness of governance meetings	57

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*
- *Element 12: Management of change and project management*
- *Element 13: Operational readiness and process start-up*
- *Element 14: Emergency preparedness*
- *Element 15: Inspection and maintenance*
- *Element 16: Management of safety critical devices*
- *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.

The information contained in this publication is provided for general information purposes only. Whilst the EI and the contributors have applied reasonable care in developing this publication, no representations or warranties, express or implied, are made by the EI or any of the contributors concerning the applicability, suitability, accuracy or completeness of the information contained herein and the EI and the contributors accept no responsibility whatsoever for the use of this information. Neither the EI nor any of the contributors shall be liable in any way for any liability, loss, cost or damage incurred as a result of the receipt or use of the information contained herein.

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

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 draft for consultation of this series of publications:

Lee Allford	European Process Safety Centre
John Armstrong	E.ON
Mike Beanland	ABB
Amanda Cockton	Health and Safety Executive
Edwin Ebiegbe	E.ON
Allen Ormond	ABB

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

Affiliations are correct at the time of contribution.

INTRODUCTION

1.1 LEADERSHIP, COMMITMENT AND RESPONSIBILITY

This guideline sets out good practice in leadership, commitment and responsibility towards effective process safety management (PSM) in an organisation. Assurance of the integrity of an organisation's operations relies on visible leadership commitment and accountability at all levels of the organisation. Management should establish health, safety and environment (HS&E) and process safety policy, set HS&E and process safety performance targets and provide the structure and resources to achieve them. They should also provide perspective – i.e. setting HS&E and process safety in context against other business values, objectives and priorities.

There are many varied aspects to 'leadership', and many texts describe approaches which form part of a leadership toolkit, whereby individuals may choose to apply, adapt or develop their own personal approach to, or style, of leadership. This guideline focuses on a number of core leadership aspects which should be considered in order to establish and maintain a sound HS&E and process safety culture. Culture has many aspects; however, in this context HS&E and process safety culture means establishing a sustainable situation where everyone engaged in the operation clearly understands what is expected of them together with what level of performance and behaviour is acceptable and what is not. In order to establish and maintain a good HS&E and process safety culture, leaders should ensure that:

- A HS&E and process safety policy is defined and then understood by all.
- HS&E and process safety performance targets and objectives are established together with action plans to achieve them.
- Effective management systems and governance and support arrangements are in place.
- They understand what is happening in the workplace.
- They define the required behaviours and demonstrate them, leading by example.

1.2 EXPECTATIONS FOR ELEMENT 1: LEADERSHIP, COMMITMENT AND RESPONSIBILITY

Element 1 of EI *High level framework for process safety management (PSM framework)* describes 15 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 Assurance of the integrity of an organisation's operations requires visible leadership commitment and accountability at all levels of the organisation. Management must establish HS&E and process safety performance targets and provide structure and resources to achieve them.

1.1 A documented HS&E and process safety policy is in place and signed by the chief executive officer (CEO) or the appropriate unit managing director (MD). These are living systems which are regularly reviewed and updated to reflect the needs of the organisation.

1.2 HS&E and process safety governance and support arrangements are defined and implemented at all levels from the board through to the workforce.

- 1.3** An HS&E and process safety risk management system (MS) is in place which meets applicable legislation, the EI *PSM framework* expectations and other requirements to which the organisation subscribes with regard to its HS&E and process safety activities.
- 1.4** Management establishes the scope, priority and pace for the HS&E and process safety risk MS implementation, considering the complexity and risks involved with their operations and products.
- 1.5** Roles, responsibilities, authorities and accountabilities for the management of HS&E and process safety are known and exercised.
- 1.6** Sufficient competent resources are in place to cover the defined HS&E and process safety roles and responsibilities, in order to reduce the likelihood of overloaded or stressed staff having a detrimental effect which could lead to an incident.
- 1.7** Clear HS&E and process safety objectives, performance targets and action plans are established and performance is regularly evaluated against these.
- 1.8** Required HS&E and process safety leadership attributes are defined, developed and integrated into the required competencies for leaders.
- 1.9** Directors and managers visibly demonstrate personal commitment and accountability for HS&E and process safety, leading by example and upholding core values and standards of the organisation.
- 1.10** Directors and managers promote an open and trusting environment and understand how their behaviours impact others.
- 1.11** Directors and managers maintain an understanding of what is happening in the workplace in order to identify and address key HS&E and process safety issues and improvement opportunities.
- 1.12** Directors and managers recognise and reward positive HS&E and process safety behaviours and performance and intervene to correct deviations from required performance at all levels in the organisation.

- 1.13** Managers responsible for organisations operated by others communicate PSM principles to the operator and encourage the adoption of the EI *PSM framework*.
- 1.14** Arrangements for leadership, commitment and responsibility are understood and followed; understanding of arrangements and compliance with them is regularly tested.
- 1.15** 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.