

# Guidelines for the development of a response plan for significant incidents involving road fuel tankers

# GUIDELINES FOR THE DEVELOPMENT OF A RESPONSE PLAN FOR SIGNIFICANT INCIDENTS INVOLVING ROAD FUEL TANKERS

Third Edition

March 2017

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 23 000 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

Apache North Sea	Repsol Sinopec
BP Exploration Operating Co Ltd	RWE npower
BP Oil UK Ltd	Saudi Aramco
Centrica	Scottish Power
Chevron North Sea Ltd	SGS
Chevron Products Company	Shell UK Oil Products Limited
CLH	Shell U.K. Exploration and Production Ltd
ConocoPhillips Ltd	SSE
DCC Energy	Statkraft
DONG Energy	Statoil
EDF Energy	Tesoro
ENGIE	Taqva Bratani
ENI	Total E&P UK Limited
E. ON UK	Total UK Limited
ExxonMobil International Ltd	Tullow Oil
Innogy	Uniper
Kuwait Petroleum International Ltd	Valero
Maersk Oil North Sea UK Limited	Vattenfall
Nexen CNOOC	Vitol Energy
Phillips 66	Woodside
Qatar Petroleum	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 © 2017 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 990 1

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.

Hard copy and electronic access to EI and IP publications is available via our website, <https://publishing.energyinst.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](mailto:pubs@energyinst.org)

## CONTENTS

	Page
<b>Acknowledgments</b> .....	<b>6</b>
<b>Foreword</b> .....	<b>7</b>
<b>1 Introduction, scope and application</b> .....	<b>8</b>
1.1 Introduction .....	8
1.2 Scope .....	8
1.3 Application .....	10
<b>2 Command, control and co-ordination</b> .....	<b>11</b>
2.1 Organisational arrangements .....	11
2.2 Command – the roles giving direction to resolve an incident .....	11
2.2.1 Strategic (gold) .....	11
2.2.2 Tactical (silver) .....	12
2.2.3 Operational (bronze) .....	12
2.2.4 Terminology .....	12
2.2.5 Industry-specific roles .....	12
2.3 Control .....	13
2.4 Co-ordination .....	13
2.5 Implementation .....	13
<b>3 Roles and responsibilities</b> .....	<b>15</b>
3.1 Public agencies .....	15
3.1.1 Police .....	15
3.1.2 Fire and rescue service .....	15
3.1.3 Ambulance services .....	15
3.1.4 Local authorities .....	15
3.1.5 Environment agencies (Environment Agency, Natural Resources Wales, Scottish Environment Protection Agency and the Northern Ireland Environment Agency) .....	15
3.1.6 Health and Safety Executive .....	16
3.1.7 VOSA (Vehicle and Operator Services Agency) .....	16
3.1.8 Highways Agency .....	16
3.1.9 Petroleum Enforcement Authority .....	16
3.2 Industry stakeholders .....	16
3.2.1 Fuel supplier .....	16
3.2.2 Haulier .....	16
3.2.3 Receiving site .....	17
3.2.4 Spill response contractor .....	17
3.2.5 Product transfer contractors .....	18
3.2.6 Vehicle recovery operator .....	18
<b>4 Developing an emergency plan</b> .....	<b>19</b>
4.1 Risk assessment .....	19
4.2 Emergency plan structure .....	19
4.3 Emergency plan content .....	20
4.4 Review, exercising and testing .....	20

**Contents continued**

	<b>Page</b>
<b>5 Record keeping . . . . .</b>	<b>22</b>
5.1 Benefits of keeping records . . . . .	22
5.2 What should be recorded and how? . . . . .	22
5.3 Participants in record keeping . . . . .	22
<b>6 Environmental protection . . . . .</b>	<b>23</b>
6.1 Responsibilities and capabilities . . . . .	23
6.2 Equipment and training . . . . .	23
6.3 Consequences . . . . .	24
<b>7 Engaging with the media . . . . .</b>	<b>26</b>
7.1 Media co-ordination . . . . .	26
7.2 Social media and websites . . . . .	26
7.3 Media and communications officer . . . . .	26
7.4 Prepared statements . . . . .	27
<b>8 Post response activities . . . . .</b>	<b>28</b>
8.1 Debrief . . . . .	28
8.2 Review . . . . .	28

**Annexes**

<b>Annex A Example strategic (gold) commander action card . . . . .</b>	<b>29</b>
<b>Annex B Example tactical (silver) commander action card . . . . .</b>	<b>30</b>
<b>Annex C Example operational (bronze) commander action card . . . . .</b>	<b>31</b>
<b>Annex D Emergency equipment . . . . .</b>	<b>33</b>
<b>Annex E Placarding of recovery vehicles . . . . .</b>	<b>34</b>
<b>Annex F Emergency centre . . . . .</b>	<b>35</b>
<b>Annex G Incidents at receiving sites . . . . .</b>	<b>36</b>
<b>Annex H Example hazards, consequences, and mitigation measures for consideration in a risk assessment . . . . .</b>	<b>38</b>
<b>Annex I Example incident log . . . . .</b>	<b>40</b>
<b>Annex J New fuel grades . . . . .</b>	<b>42</b>
<b>Annex K Glossaries of terms, and abbreviations and acronyms . . . . .</b>	<b>43</b>
<b>Annex L References . . . . .</b>	<b>44</b>

---

## LIST OF FIGURES AND TABLES

### Page

### Figures

Figure 1	Incident response flowchart – significant incident (with links to relevant sections) . . . . .	9
Figure 2	Command and control flowchart example . . . . .	14
Figure 3	The pollution control hierarchy, (replicated from GPP 22: Dealing with spills) . . . . .	23
Figure 4	Grab bag spill kit provided to fire service. Picture courtesy of Darcy Spillcare. . . . .	24
Figure G.1	Key points for the safe operation of refuelling stations (adapted from the environment agencies' GPP 7) . . . . .	36

### Tables

Table 1	Suggested emergency plan content . . . . .	20
Table 2	Types of exercise . . . . .	21

## ACKNOWLEDGMENTS

This publication has been commissioned by the Energy Institute's (EI) Distribution and Marketing Safety Committee (DMSC) and drafted by Ricardo-AEA. At the time of publication, the DMSC comprised:

David Athersmith	Consultant
Russell Best (Chairperson)	P66 Ltd
Tony Brown	Federation of Petroleum Suppliers
Colin Fenwick	Wincanton
Vickie Knight	Shell U.K. Oil Products Limited
Neil Leyshon	BP Oil UK Ltd
Toni Needham	Energy Institute
Ken Palmer	Consultant
Toni Needham (Secretary)	Energy Institute
Barrie Salmon	Tank Storage Association
Dr Mark Scanlon	Energy Institute
Kathy Whileman	ExxonMobil
John Wormald	Total UK Ltd

Affiliations refer to the time of participation.

The EI wishes to record its appreciation of the work carried out by DMSC members in developing the content and reviewing drafts of this publication.

Technical editing and project coordination was initially carried out by Toni Needham and latterly carried out by Dr Mark Scanlon (EI).

## FOREWORD

This publication provides good practice guidance to road fuel companies, road tanker operators and third party contractors and specialists involved in transporting petroleum, petroleum products and new fuel grades or other hazardous goods such as liquefied petroleum gas, in preparing a response plan for significant incidents involving road tankers.

Road fuel tanker operators have a legal responsibility under the Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulation and the European Agreement concerning the Carriage of Dangerous Goods by Road (ADR) to have in place a response plan to protect their employees, the public, property and the environment in the event of accidents or incidents involving the carriage of dangerous goods. It is for the Dangerous Goods Safety Advisor (DGSA) to ensure that such a plan is up to date and able to be implemented.

The guidance set out in this publication is suitable for those with large fleets operating on a national basis or small enterprises with a few petroleum road tankers operating in a limited area. Response plans developed using this publication should match the scale and nature of those operations and should cover foreseeable scenarios where a petroleum road tanker has been involved in a significant incident, possibly overturning and spilling product that may impact a third party, property or the environment. To assist companies in developing their own plans, this publication sets out some generic procedures.

This publication should help companies to better understand, but not take over, the roles and capabilities of the emergency services and other stakeholders in significant incidents. It may also be used as a point of reference by the emergency services and other stakeholders as it sets out good practice in handling significant incident response and enables the emergency services to plan for a known level of industry assistance. Adoption of this publication as good practice should therefore establish a common approach across the petroleum industry to significant incident response and enable emergency services to plan for a known level of industry assistance.



# 1 INTRODUCTION, SCOPE AND APPLICATION

## 1.1 INTRODUCTION

This publication is intended to guide companies to develop an emergency plan to effectively respond to incidents involving road fuel tankers.

Element 14 of the EI's *High level framework for process safety management* states:

'The consequences of an incident can be significantly reduced if an organisation is appropriately prepared to handle emergency situations.

Management must ensure that, in the event of an incident, the organisation is appropriately prepared for all necessary actions which may be required for the protection of: the public; the organisation's and contractor's personnel; the environment; plant and equipment, and the organisation's reputation.'

This publication provides a thorough overview on what preparedness looks like for significant incidents involving road fuel tankers, and the benefits of adopting a robust approach, namely that the consequences for an organisation can be reduced (lives lost, environmental impact, financially and reputation). Figure 1 provides a flowchart detailing what the recommended approach should entail.

Due to the complex nature of the downstream fuels sector and the contractual relationships between manufacturers, hauliers and specialist response contractors, there are a large number of organisations who have a role to play in emergency response. This publication sets out what each organisation should do and what roles its staff should undertake in a response.

The publication does not, however, contain all the information that might be required to undertake an emergency planning process. Most sections provide links to sources of further guidance on specific areas.

The emergency services will play a vital part in any incident; however, there is an expectation that the company involved will deploy resources to remediate spills and recover road tankers as necessary. With the growing focus on the importance of protecting the environment this aspect of a response should be considered thoroughly. The penalties and potential losses for polluting the environment are severe and should not be underestimated. This publication contains information on how to enact a successful response to a potential environmental incident and protect your company.

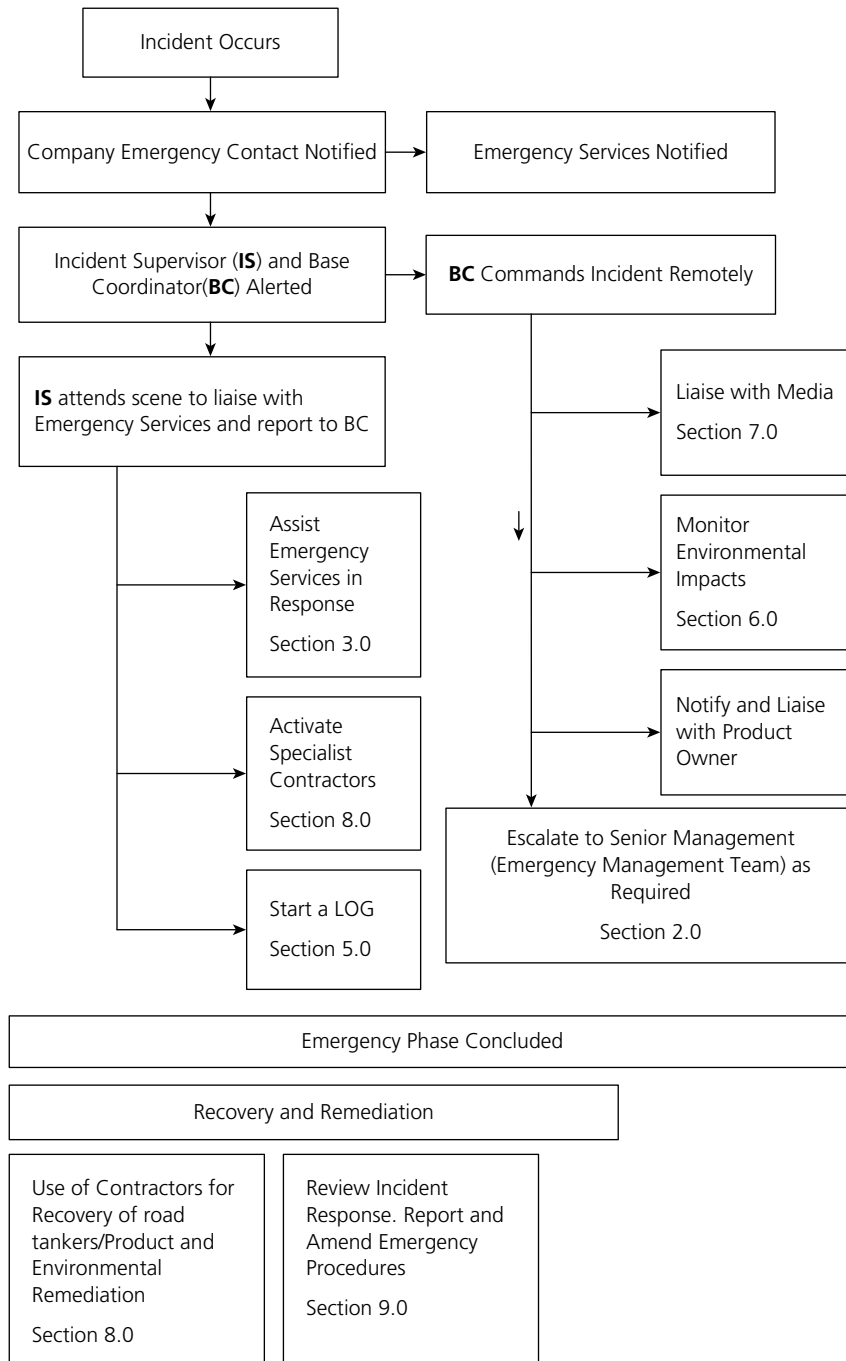
This publication is intended to be used as a reference and as a source of good practice. It is not intended to be a 'how to' guide. While at the time of writing the references to regulations and legislation were accurate, readers should check that this information is correct when preparing, revising or reviewing an emergency response plan.

## 1.2 SCOPE

The scope of this publication includes:

- Significant incidents: as a minimum, these threaten, or have the potential to threaten life, the environment or property.

- Road tankers: road tankers transporting petroleum, petroleum products and new fuel grades (e.g. biofuels) at atmospheric pressure. However, the principle could also be applied to other hazardous goods, including those carried above atmospheric pressure e.g. liquefied petroleum gas.



**Figure 1: Incident response flowchart – significant incident (with links to relevant sections)**

### **1.3 APPLICATION**

This publication is intended to be used by parties involved in response planning for significant incidents involving road tankers. Readers may include those that prepare/or review response plans, including those in fuel supplies, haulage companies, public agencies (e.g. environmental agencies, fire and rescue services, etc.) and spill response contractors. Whilst written in the context of the requirements of UK legislation and UK organisations, the principle should be applicable elsewhere, providing the publication is read alongside national and local requirements.