## Contents

1. **Foreword**  
2. **Health: Significant Issues and Activities**  
   2.1 An Ageing Workforce?  
   2.2 Deaths from Medical Causes Among Offshore Workers  
   2.3 Serious Medical Events Among Offshore Workers  
   2.4 Smoking and E-Cigarettes  
   2.5 Nutrition and Food Quality  
   2.6 Management of Occupational Health  
3. **Safety Performance**  
   3.1 Oil & Gas UK Benchmarking  
   3.2 Health and Safety Executive Statistics (Personal Injuries)  
   3.3 Asset Integrity Key Performance Indicators  
4. **Safety: Significant Issues and Activities**  
   4.1 European Union Offshore Safety Directive  
   4.2 Health and Safety Executive Energy Division  
   4.3 Ageing and Life Extension  
   4.4 Size and Shape of the Offshore Workforce  
   4.5 Joint Auditing Initiative  
   4.6 Helicopter Incidents  
   4.7 Helideck Issues on Normally Unattended Installations  
   4.8 Helimet  
   4.9 Helideck Lighting  
   4.10 Pipeline and Riser Loss of Containment Database  
5. **Offshore Helicopter Transport Safety Record**  
   5.1 Background  
   5.2 Current Helicopter Types  
   5.3 Offshore Helicopter Reportable Accidents on the UK Continental Shelf  
   5.4 Accident Analysis  
   5.5 Safety Improvements and Initiatives  
   5.6 Summary  
6. **Regulatory Consultations**  
7. **Oil & Gas UK’s Work in Representative Bodies**  
8. **Step Change in Safety**  
9. **Publications**  
10. **Oil & Gas UK Health and Safety Events from 2013 to 2014**  
11. **Focus Areas for 2014**  
   11.1 European Union Safety Directive  
   11.2 Ageing and Life Extension  
   11.3 Guidelines  
   11.4 Size and Shape of the Offshore Workforce  
   11.5 CAA Review of Offshore Helicopter Safety (CAP 1145)  
   11.6 Helimet  
   11.7 Helideck Lighting  
   11.8 Helideck Issues for Normally Unattended Installations  
   11.9 Pipeline and Riser Loss of Containment Database  
   11.10 Relationship with Step Change in Safety  
12. **Glossary**
## 1. Foreword

Welcome to Oil & Gas UK’s annual *Health & Safety Report* which provides updates on aspects of the industry’s health and safety performance and commentary on a range of issues and activities managed by Oil & Gas UK in 2013.

Last year marked the 25th anniversary of the Piper Alpha disaster in which 167 people lost their lives. The industry marked this significant anniversary with a major conference which saw 700 delegates from across the global industry spend three days reflecting and reviewing how health and safety management has improved since Piper Alpha, as well as renewing and reinforcing the industry’s commitment to continuous improvement in major hazard management. The Workforce Involvement Day, run by Step Change in Safety as part of the conference, attracted a further 500 delegates and added to the acknowledged success of the event. The industry also supported a campaign to fund the refurbishment of the Piper Alpha memorial garden in Hazlehead Park, Aberdeen, and held a service of remembrance and rededication at the garden on 6 July 2013.

Twenty-five years on, Piper Alpha still serves as a shocking and enduring reminder of the inherently hazardous nature of our industry and of the need for continued vigilance in our management of those hazards. Piper Alpha is the lens through which we view our safety efforts and the lessons learnt by the industry still shape the activities described in this report.

Aviation matters, again, dominated the industry’s safety agenda in 2013. The year started with the continued suspension of EC225 helicopter flight operations following the ditchings on the UK Continental Shelf in 2012. Flights began to be reinstated during quarter four 2013 following forensically detailed investigation and remedial work to provide the necessary safety assurances.

However, on 23 August 2013, a Eurocopter Super Puma L2 crashed on approach to Sumburgh Airport with the tragic loss of four lives. That incident led to an initial, voluntary, temporary suspension of all Super Puma helicopter flights until it became clear that there had not been a technical failure. The Air Accident Investigation Branch’s inquiry into this event is still ongoing.

This fatal accident, combined with other recent incidents, prompted reviews of UK offshore aviation safety by various bodies, including the Helicopter Safety Steering Group, the Parliamentary Transport Select Committee and the Civil Aviation Authority (CAA). The CAA published its report CAP 1145 in February 2014, setting out a number of recommendations and required actions designed to improve offshore helicopter transportation safety. Many of the actions will have far-reaching implications for the industry and are now the subject of significant attention and effort to ensure compliance.

As outlined in our 2013 report, the industry successfully argued the case for a European Union (EU) Directive on offshore safety, rather than a Regulation, as the best means to raise safety standards across Europe while still preserving aspects of the UK’s exemplary regulatory regime. In July 2013, the EU Directive was published and industry is making significant efforts to support the Health and Safety Executive (HSE) and the Department of Energy & Climate Change in transposing the Directive into UK legislation for implementation by 15 July 2015.
The HSE Key Programme 4 (KP4) focused three years of regulatory inspection effort on the industry’s management of ageing and life extension (ALE). This programme drew to a close in December 2013 with the final report published in May 2014. The report states that the industry has responded well to KP4 and has many effective strategies and practices in place to ensure the safe, long-term operation of offshore installations. Oil & Gas UK will continue to cooperate with the HSE and to implement a range of improvement recommendations set out in the report. Oil & Gas UK will also publish further good practice ALE guidance.

From a health and safety performance perspective, 2013 tells a mixed story. The national statistics published by the HSE demonstrate that the offshore oil and gas industry continues to perform better than many less hazardous industrial sectors, and has achieved 35 per cent better performance than the ‘all industries’ average. However, within this overall positive picture, safety trends within the industry have fluctuated. Key metrics of reportable injuries and dangerous occurrences have shown relatively minor deterioration in 2013 compared to 2012.

Meanwhile, in April 2013, the industry confirmed that it had achieved a 49 per cent reduction in hydrocarbon releases, narrowly missing a target reduction of 50 per cent over a three-year period. The industry then set itself a new target of a further 50 per cent reduction in the next three years. Regrettably, however, hydrocarbon release performance for the remainder of 2013 was less encouraging, with an increase in the total number of releases recorded; although, this masks a decrease in the number of major and significant releases recorded in the same period. Nevertheless, both the regulator and industry are now refocusing attention and effort on hydrocarbon release prevention strategies and programmes.

All of these matters are expanded upon within this report and as always we hope that you find the publication interesting and informative. Any queries on content or feedback should be directed initially to Robert Paterson, Oil & Gas UK’s health, safety and employment issues director, on rpaterson@oilandgasuk.co.uk.

Robert Paterson
Health, Safety and Employment Issues Director, Oil & Gas UK
2.  **Health: Significant Issues and Activities**

While the UK offshore oil and gas industry has traditionally been good at examining its safety record and the underlying causes of incidents, health and safety reports have less frequently examined health issues in the same way. This report has not previously included health content and we are grateful to our medical advisor, Dr Graham Furnace, for this contribution which provides a good foundation for future reports.

2.1 **An Ageing Workforce?**

The Oil & Gas UK *Offshore Workforce Demographics Report 2014* reveals that the average age of the UK offshore workforce has remained fairly constant since 2006 in the range of 40 to 41 years. This is to be expected for a workforce predominantly aged between 20 and 65. The average age of the offshore worker in 2013 was 40.8 years. Moreover, the report shows that while the number of older workers has remained relatively constant, the number of younger workers has increased, thereby dispelling the myth of an ageing workforce. The below graph shows that a significant proportion of the workforce is under the age of 35 and that this is where the most growth occurs.

*Figure 1: The Age Profile of the Offshore Workforce from 2010 to 2013*

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1  *The UK Continental Shelf Offshore Workforce Demographics Report 2014* is available to download at [www.oilandgasuk.co.uk/knowledgecentre/Offshore_workforce_demographics.cfm](http://www.oilandgasuk.co.uk/knowledgecentre/Offshore_workforce_demographics.cfm)
2.2 Deaths from Medical Causes Among Offshore Workers

Although the industry gathers figures on deaths and serious injury due to accidents, figures for deaths or serious events due to medical causes are difficult to obtain. With the co-operation of the Health and Safety Executive (HSE) and Grampian Police (now Police Scotland), Oil & Gas UK gathered available data for the northern sector of the UK North Sea and figures are available for 2011 and 2012. In these two years, a total of nine deaths due to medical causes are known to have occurred in offshore workers in the northern sector while on offshore installations. Of these, eight were due to cardiovascular disease and one due to suicide. The deaths from cardiovascular disease all occurred in persons over 40 (the youngest being 43), and five of the eight deaths were in persons over 50. In only two instances were the workers thought confidently to be non-smokers.

These figures may underestimate the actual number of deaths which occurred, but they suggest that a major cause of medical mortality among offshore workers may be cardiovascular disease (meaning heart attack) and that smoking may be implicated in such deaths. There is a need to gather better and more robust figures on offshore medical mortality in future to understand and address the risk factors involved.

2.3 Serious Medical Events Among Offshore Workers

Serious medical events among offshore workers will inevitably result in the worker being ‘medevaced’ to medical care ashore. Two medical provider companies offer most of the medical cover for the UK sector. No precise figures are currently available on the number and causes of medevac of offshore personnel, but it is known that two studies are either under way or in the planning stage, with the aim of providing this information. Accounts from doctors providing ‘topside’ medical services to industry suggest that a major cause of serious medical illness leading to medevac of offshore personnel is cardiovascular disease and, increasingly, strokes.

Understanding the pattern of serious medical illness occurring in offshore workers is essential to planning medical care for the workforce, and it is expected that future editions of this report will include an annual summary from ‘topside’ service medical providers regarding the number and causes of serious medical occurrences offshore.

2.4 Smoking and E-Cigarettes

Safety-related constraints stipulate that smoking is only permitted within designated safe locations on offshore installations. Recent government figures indicate that the proportion of smokers in the general population continues to fall over time, whilst nicotine use in the form of ‘e-cigarettes’ is increasing. Employers across the industry have requested advice from Oil & Gas UK, which is expected to lead to guidance being produced on managing nicotine use on the UK Continental Shelf (UKCS).

2.5 Nutrition and Food Quality

The quantity and quality of food consumed clearly has an influence on the development of obesity, and the Department of Health has published guidance for employers and caterers on the nutritional standards of food provided in workplaces. It is uncommon for explicit provisions on the nutritional quality of food to be included in catering contract arrangements, but it is expected that concerns regarding the shape and size of offshore workers, which has changed significantly in the last three decades, will change this situation in the future.

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2 Healthier and More Sustainable Catering: A Toolkit for Serving Food to Adults is available to download at www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults
2.6 Management of Occupational Health

The structure of the offshore workforce, with many employed by contractors to operator/duty holders, and the nature of the working pattern, which involves many workers moving between installations, has led to difficulties in areas of occupational health management, such as exposure data monitoring and occupational health surveillance.

In 2012 and 2013, Oil & Gas UK ran seminars for occupational health professionals across the industry, providing an opportunity to share practical experience in resolving such difficulties. The seminars have been well received and, this year, Oil & Gas UK has established an informal work group for occupational health professionals in response to demand for a more frequent forum to share practical solutions to occupational health problems. It is hoped that additional opportunities to share knowledge and experience will result in wider adoption of successful approaches to managing occupational health issues across the industry.
3. Safety Performance

This section outlines key aspects of the UK offshore oil and gas industry’s safety performance using a number of metrics and a range of reference sources. Please note that the data sets cover different periods and where appropriate and feasible the individual charts below stipulate the relevant reporting period.

3.1 Oil & Gas UK Benchmarking

Each year, Oil & Gas UK carries out a benchmarking exercise for installation duty holders to gain an overview of the UK industry’s safety performance. This is conducted on an anonymous basis with companies allocated a letter as illustrated in Figure 4. Each participating company receives their individual company results which are issued to their representative on Oil & Gas UK’s Health & Safety Forum.

**Figure 2: Companies Participating in the Benchmarking Exercise**

<table>
<thead>
<tr>
<th>Participating Companies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AMEC</td>
<td>E.ON E&amp;P UK Limited</td>
</tr>
<tr>
<td>Apache North Sea</td>
<td>Maersk FPSO UK Ltd</td>
</tr>
<tr>
<td>BG Group Plc</td>
<td>Maersk Oil North Sea UK Ltd</td>
</tr>
<tr>
<td>BHP Billiton Petroleum Ltd</td>
<td>Marathon Oil UK Ltd</td>
</tr>
<tr>
<td>Bluewater Services UK Limited</td>
<td>Nexen CNOOC UK Ltd</td>
</tr>
<tr>
<td>BP Exploration Operating Company Ltd</td>
<td>Perenco UK Limited</td>
</tr>
<tr>
<td>Britannia Operator Ltd</td>
<td>Petrofac Facilities Management Ltd</td>
</tr>
<tr>
<td>Centrica Energy Upstream</td>
<td>Premier Oil UK Limited</td>
</tr>
<tr>
<td>Centrica Storage Ltd</td>
<td>RWE Dea UK Ltd</td>
</tr>
<tr>
<td>Chevron North Sea Ltd</td>
<td>Shell UK Limited</td>
</tr>
<tr>
<td>CNR International UK Ltd</td>
<td>Talisman-Sinopec Energy UK</td>
</tr>
<tr>
<td>ConocoPhillips UK Ltd</td>
<td>TAQA Bratani Ltd</td>
</tr>
<tr>
<td>Dana Petroleum Plc</td>
<td>TOTAL E&amp;P UK Limited</td>
</tr>
<tr>
<td>EnQuest Plc</td>
<td>Wood Group Engineering (North Sea) Ltd</td>
</tr>
</tbody>
</table>

N.B. It is important to note that companies are listed above in alphabetical order and this does not correspond to the letters allocated to companies in the performance charts in Figure 4.

The benchmarking uses incident data from the HSE and man-hour data from the Vantage Personnel on Board (POB) tracking system. The injury rates are then calculated per million man-hours based on a 12-hour workday as illustrated in Figure 3 below.

**Figure 3: Oil & Gas UK’s Safety Performance Benchmarking Calculation**

\[
\text{Number of Incidents} \times 1,000,000
\]

- Calendar-year based
- Production installations and linked installations only
The key performance indicators used in the benchmarking process are:

- Reportable injuries (fatalities, specified injuries and over-seven-day injuries) according to the Reporting of Injury, Diseases and Dangerous Occurrences Regulations (RIDDOR). Please note that ‘specified injuries’ replaces the previous list of ‘major injuries’. More information on this change can be found at www.hse.gov.uk/riddor/index.htm
- RIDDOR reportable dangerous occurrences including hydrocarbon releases

The industry also tracks and measures hydrocarbon releases as part of its asset integrity management monitoring, which is reported and commented upon in section 3.3 of this report.

The 2013 data are based on over 56 million man hours worked by the 28 participating operating companies, an increase of five million from 2012.

The charts below and overleaf reveal a disappointing rise in the frequencies of reportable injuries and dangerous occurrences from 2012 to 2013 of about five per cent and nine per cent, respectively. Although these increases are in themselves relatively small, they do reflect a slight deterioration in performance rather than the continual improvement typically achieved. Nonetheless, the performance is still better than was achieved in 2011.

Oil & Gas UK will engage with its Health & Safety Forum members and with relevant groups within Step Change in Safety to attempt to better understand the performance and to identify any areas for improvement at an industry level. Any cross-industry action would supplement measures implemented at duty holder/employer level where incident prevention arrangements and the effects of those arrangements are managed.

**Figure 4: Installation Duty Holders’ Safety Performance Benchmarking Results**

![Chart showing reportable injury frequencies]

Source: Health and Safety Executive, Vantage POB and Oil & Gas UK
The table below shows the actual numbers of incidents and man-hours over a three-year period. This provides a breakdown of injury severity which is not apparent in Figure 4 above and highlights, for example, that there were no fatalities in 2013 for the second year in a row. As this report is published, we are aware of an offshore fatality that occurred in February 2014. Calendar year performance reporting means that this will be included in 2014 figures in next year’s annual report.

*Figure 5: Safety Performance Benchmarking Statistics*

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Reporting Companies</th>
<th>Fatalities</th>
<th>Major/Specified Injuries</th>
<th>Over Three/Seven Day Injuries</th>
<th>Dangerous Occurrences</th>
<th>Man-Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>28</td>
<td>2</td>
<td>25</td>
<td>72</td>
<td>347</td>
<td>45,081,195</td>
</tr>
<tr>
<td>2012</td>
<td>26</td>
<td>0</td>
<td>27</td>
<td>70</td>
<td>260</td>
<td>51,339,945</td>
</tr>
<tr>
<td>2013</td>
<td>28</td>
<td>0</td>
<td>32</td>
<td>81</td>
<td>316</td>
<td>56,695,543</td>
</tr>
</tbody>
</table>

Source: Health and Safety Executive, Vantage POB and Oil & Gas UK
3.2 Health and Safety Executive Statistics (Personal Injuries)

The UK offshore oil and gas industry is a major hazard industry. However, in comparison with other comparatively lower hazard UK industry sectors, it has a low personal injury rate and performs better than average. The charts below are based on data provided by the HSE and the data sets are drawn from RIDDOR reports. The data are therefore considered to be reliable and verifiable.

*Figure 6: The Three-Year Average (2010 to 2013) Non-Fatal Injury Rate by UK Industry Sector per 100,000 Workers*

Source: Health and Safety Executive
Focusing specifically on the offshore oil and gas sector, Figures 7 and 8 below illustrate a steady decline in non-fatal and over-three-day/over-seven-day injuries. However, the combined fatal and major injury rate increased by approximately 13 per cent last year. Although there were zero fatalities in 2012/2013, the number of major injuries recorded in that period were 47, 11 more than in 2011/2012, which may explain this increase in the combined injury rate.

Figure 7: The Three-Year Rolling Average of Non-Fatal Injury Rate per 100,000 Workers for the UK Offshore Oil and Gas Sector, 2003 to 2013

![Diagram showing the three-year rolling average of non-fatal injury rate per 100,000 workers for the UK offshore oil and gas sector, 2003 to 2013.](source: Health and Safety Executive)

Figure 8: Over-Three-Day/Over-Seven-Day Injury and Combined Major and Fatal Injury Rates for the UK Offshore Oil and Gas Industry

![Diagram showing over-three-day/over-seven-day injury rate and combined major and fatal injury rate for the UK offshore oil and gas industry.](source: Health and Safety Executive)

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3 From 2012, the reportable criteria under RIDDOR has changed from over-three-day injuries to over-seven-day injuries.
3.3 Asset Integrity Key Performance Indicators

The HSE’s Key Programme 3 (KP3) inspection programme on asset integrity management ran from 2004 through to 2007, with asset integrity defined as “the ability of an asset to perform its required function effectively and efficiently while protecting health, safety and the environment”. Asset integrity management was defined as “the means for ensuring that people, systems, processes and resources that deliver integrity are in place, in use, and will perform on demand over the whole life cycle of the asset”.

One of the many responses from the UK offshore oil and gas industry to KP3 was to develop additional asset integrity related key performance indicators (KPI) that would consistently demonstrate industry progress in this area over time and complement hydrocarbon release statistics. The criteria for the KPIs were that:

- They present meaningful information that can be trended over time
- They comprise data that are readily available to all or most operators with little or no further effort to collect and report
- They are consistently defined and applied across operators

The industry set up a voluntary asset integrity KPI scheme, with data collected since 2008. The scheme is administered by Oil & Gas UK and collates data from operators and duty holders. The three current cross-industry asset integrity-related KPIs are:

- KPI-1: Hydrocarbon Releases
- KPI-2: Verification Non-Compliance
- KPI-3: Safety-Critical Maintenance Backlog

Figure 9: Asset Integrity Key Performance Indicators used in the UK Offshore Oil and Gas Industry
KPI-1 is a lagging indicator and is monitored by the HSE through incident reporting mechanisms. KPI-2 and KPI-3 serve as leading indicators looking at performance relating to safety-critical elements. They enable the industry to monitor and measure the effectiveness of key aspects of asset integrity management programmes and activities.

This section provides an update of the data collected by the HSE (KPI-1) and Oil & Gas UK (KPI-2 and 3) in 2013. Please note that the HSE reporting period is April to March. The Oil & Gas UK reporting period is January to December.

It is noted that the level of participation in the KPI scheme has diminished during 2013 to the point where 13 duty holders covering 120 assets consistently report. That compares to peak participation of 21 duty holders and 190 assets. That regression will be investigated and effort will be applied to reinvigorate the scheme. We will also need to understand whether the changed group membership has had any bearing on the KPI results.

3.3.1 KPI-1 Hydrocarbon Releases

Hydrocarbon releases (HCRs) are in simple terms oil and gas leaks. Duty holders of offshore installations supply the data contained on the HCR system voluntarily to the HSE. These relate to incidents that are reportable under RIDDOR. They are classified as major, significant or minor HCRs based on their potential to cause a major accident if ignited.

In 2010, the offshore industry’s safety initiative, Step Change in Safety, agreed with all its member companies to redouble efforts to reduce the total number of HCRs. They set an objective to achieve a 50 per cent reduction in the number of reportable HCRs by the end of March 2013, measured against the 2010 total HCR figure of 187. The industry fell just short of the 50 per cent reduction target achieving a 49 per cent decrease over the three-year period. In addition to the overall improvement, a 46 per cent reduction in major and significant HCRs in the three-year period was also very encouraging.

The Step Change Leadership Team (SCLT) is committed to HCR prevention and is now working towards a new target of a further 50 per cent reduction in total reportable HCRs over the next three years.

Figure 10, right, features provisional data received from the HSE for the period April 2013 to March 2014. Current analysis shows that the total number of HCRs was 115 compared with 97 from 2012 to 2013, which is a 19 per cent increase. The data show, however, that the combined total of major and significant releases is roughly 17 per cent fewer than the previous year and that the increased number of total HCRs therefore relates to a rise in minor releases.

In quarter four 2013, Susan Mackenzie, the then head of the HSE’s Energy Division, wrote to duty holder managing directors drawing their attention to the reversal in previously improving HCR performance and asking them to set out and communicate their strategy and plans for HCR reduction. The renewed focus on HCR prevention is evident among duty holder companies and also at industry level, where Step Change in Safety work groups are driving the efforts to improve HCR performance and to understand the underlying causes.

In early 2014, an Oil & Gas UK work group published new Supplementary Guidance on RIDDOR Reporting of Hydrocarbon Releases. More information on this publication can be found in section 9.1 of this report.

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4 Safety-critical elements are parts of an installation and of its plant (including computer programs), or any part thereof:
• The failure of which could cause or contribute substantially to a major accident
• The purpose of which is to prevent, or limit the effect of, a major accident
Figure 10: Number of Hydrocarbon Releases Occurring Offshore

Source: Health and Safety Executive
3.3.2 KPI-2 Verification Non-Compliance

The safety-critical parts of offshore installations are subject to a verification process to ensure that they are suitable for their intended purpose and remain in good condition and repair. Safety-critical parts of an installation include, for example, fire and gas detection, emergency shutdown and temporary refuge. Verification is undertaken by an independent competent person (ICP) and the findings are ranked as levels 1, 2 or 3 using common definitions as outlined below and reported to Oil & Gas UK on a quarterly basis. KPI-2 monitors and measures non-compliances under levels 2 and 3, as they are the more significant findings.

Figure 11: Current Definitions – Verification Findings

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Performance standard satisfied, but an independent competent person (ICP) may suggest an improvement to the system or may request additional information to demonstrate compliance with a performance standard.</td>
</tr>
<tr>
<td>2</td>
<td>Single performance standard failure with no significant threat to the installation</td>
</tr>
<tr>
<td>3</td>
<td>Fundamental weakness of the safety-critical element assurance system that: • involves multiple failures of a performance standard(s) or • presents a significant threat to the integrity of the installation</td>
</tr>
</tbody>
</table>

5 Level 1 performance is tracked by duty holders but is not part of the industry KPI scheme
Figure 12 below illustrates the number of open Level 2 findings per installation since the scheme started in 2008 to the end of 2013. Although overall improvement can be seen in the period, there is an, as yet, unexplained upward trend in the second half of 2013. This will be investigated further with specialist personnel. Even allowing for that trend, however, the specialists who provide the data and manage assurance and verification within duty holder companies believe that the numbers give no real cause for concern.

*Figure 12: Average Number of Open Level 2 Findings per Installation at the End of a Quarter*
Level 3 findings shown in Figure 13 below relate to more serious matters of concern. Therefore, as might be expected, such findings are relatively rare and the number of Level 3 findings per installation is so small that the total number across all participating installations is monitored and reported.

Since the introduction of the scheme in 2008 the industry has consistently reduced the number of Level 3 findings. Despite a slight upward movement in Level 3 findings over the course of 2013, overall improvement of 80 per cent over the whole monitoring period can be seen in the chart. Remedial and improvement actions to close out findings are of course managed at duty holder rather than industry level.

*Figure 13: Total Number of Open Level 3 Findings at the End of a Quarter*
3.3.3 KPI-3 Safety-Critical Maintenance Backlog

The KPI-3 produces a report of the total number of backlog hours for safety-critical maintenance that is beyond its planned completion date. This excludes backlog maintenance that has been subject to a formal and robust deferral process involving relevant technical or engineering authorities.

As can be seen in Figure 14 below, the data show a seasonal (cyclic) nature probably reflecting campaign maintenance patterns (for example, planned major maintenance shutdowns). From January 2013, periodic increases can be seen in the backlog figures and these will be explored further by Oil & Gas UK’s KPI work group and Assurance & Verification Network. Possible contributors to the increased backlog might include the suspension of EC225 helicopter operations for part of 2013, following the ditchings in 2012, and a protracted period of adverse weather in quarter one 2013. It is also possible that overall numbers are distorted by a relatively small number of high man-hour maintenance routines falling into backlog. As quoted in previous annual reports, maintenance specialists within the KPI work group regard the historical backlog performance as acceptable while still making every effort to drive backlog down.

*Figure 14: Average Number of Planned Maintenance Man-Hours in Backlog per Installation*
4. **Safety: Significant Issues and Activities**

This section summarises some of the more significant health and safety issues and activities affecting the industry and, in turn, Oil & Gas UK during 2013. It does not set out to represent the entire scope of issues and activities, only those of higher significance or of wider interest to member companies and other stakeholders.

4.1 **European Union Offshore Safety Directive**

The European Commission (EC) published a draft Regulation on offshore oil and gas safety in October 2011 following its review in response to the April 2010 Deepwater Horizon disaster in the Gulf of Mexico. Oil & Gas UK supports the general objective of seeking to raise safety standards across European offshore oil and gas operations, but believes a Regulation would have dismantled the post-Piper legal framework in the UK and would have been hugely administratively burdensome to apply without significant safety improvement. As a result, Oil & Gas UK was part of an active campaign to change the legislative instrument from a Regulation to a Directive and, on 28 June 2013, the EC published Directive 2013/30/EU on the safety of offshore oil and gas operations. The objective is to set minimum requirements to reduce as far as possible the occurrence of major accidents related to offshore oil and gas operations and to limit their consequences. The Directive has to be implemented by Member States by 19 July 2015.

The Department of Energy & Climate Change (DECC) and the HSE are working collaboratively to transpose the Directive into UK law. Oil & Gas UK’s directorates in health, safety and employment issues; environment; and operations have been working closely with the regulators to provide the industry perspective on the proposed regulatory changes. Furthermore, European Union (EU) Directive work groups enable Oil & Gas UK members to communicate with the HSE and DECC throughout the transposition process and to review and comment on any proposals relating to the Directive and its implementation. To date, the work groups have been involved in matters such as gap analysis and proposals for sharing information and transparency between competent authorities in relation to a range of specified events.

Indications are that the majority of the Directive will be transposed into new Offshore Installation (Safety Case) Regulations, although some existing HSE and DECC legislation will also need to be amended to fully implement the Directive. This is the most significant legislative change to affect our industry for some time and members have supported Oil & Gas UK’s efforts to ensure that the transposition results in relevant and proportionate change, and that the current, well established, safety and environmental regime on the UKCS is not diminished.

The HSE’s website provides up-to-date information on the new or revised Regulations and the implementation of the Directive.

4.2 **Health and Safety Executive Energy Division**

On 1 April 2013, the HSE’s Offshore Division was restructured to become part of a new Energy Division comprising Offshore, Pipelines (on and offshore) and Mines Inspectorates. This new Energy Division more closely aligns the HSE with changes in the external energy environment, as it assumes responsibility for a number of emerging technology areas, such as offshore renewables, shale gas, coal bed methane and carbon sequestration.
Susan Mackenzie, who was previously head of the Specialised Industries Division, was appointed to lead the Energy Division\(^7\). Steve Walker, who had been head of the now disbanded Offshore Division, took on a new role as the Energy Division’s head of strategic interventions until his retirement in April 2014. Steve also continued to lead strategic engagement with key national and international organisations, influencing the future regulation of the energy sector\(^8\).

### 4.3 Ageing and Life Extension

The HSE’s KP4 inspection programme focused attention on the industry’s management of ageing and life extension (ALE). Having run for the past three years, it drew to a close in December 2013, completing a total of 33 inspections of duty holders and offshore installations across nine specialist topics, namely: structures; marine; mechanical; corrosion; electrical, control and instrumentation; human factors; pipelines; fire and blast; and process integrity (note that not all nine topics featured in every inspection). Additionally, HSE inspection management teams reviewed safety management systems from an ALE perspective.

Throughout 2013, Oil & Gas UK maintained regular contact with the HSE and developed technical advice to supplement its *Guidance on the Management of Ageing and Life Extension for UKCS Oil and Gas Installations*\(^9\). Over the course of the year, work groups met regularly to produce technical guidance in three specific areas of ALE management: floating production installations; offshore structures; and electrical, controls and instrumentation.

This work was overseen by Oil & Gas UK’s ALE steering group, which also provided direction on general ALE matters. The steering group is chaired by Oil & Gas UK and comprises representatives from a number of its member companies and the International Association of Drilling Contractors (IADC). The HSE’s KP4 manager is also a member of the steering group, providing first-hand insight into inspection findings and wider ALE issues; this is indicative of the collaborative approach that has characterised KP4 with the shared objective of effective ALE management across industry.

The HSE published its findings from the KP4 inspection programme in a final report released at an Oil & Gas UK seminar on 28 May 2014\(^10\). The event provided an opportunity to hear those findings first-hand and to present the industry perspective on ALE. The HSE website\(^11\) is an invaluable source of information on KP4 and the wider aspects of ALE management.

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\(^7\) In May 2014, the HSE announced that Susan Mackenzie had been promoted to Director of the Hazardous Installations Directorate. A replacement has not yet been announced.

\(^8\) Further information on the Energy Division can be found at [www.hse.gov.uk/offshore/who.htm](http://www.hse.gov.uk/offshore/who.htm)

\(^9\) *The Guidance on the Management of Ageing and Life Extension for UKCS Oil and Gas Installations Issue 1* was published in April 2012 and is available to download at [www.oilandgasuk.co.uk/publications/index.cfm](http://www.oilandgasuk.co.uk/publications/index.cfm)

\(^10\) The HSE’s final report on KP4 is available to download at [www.hse.gov.uk/offshore/ageing/kp4-report.pdf](http://www.hse.gov.uk/offshore/ageing/kp4-report.pdf)

\(^11\) More information on KP4 and ALE management can be found at [www.hse.gov.uk/offshore/ageing.htm](http://www.hse.gov.uk/offshore/ageing.htm)
4.4 Size and Shape of the Offshore Workforce

Confined space working and general space limitations are commonplace within the offshore oil and gas industry and it is the workers’ size and shape that determines their fit within this environment. The last survey of offshore workers’ body sizes was completed almost 30 years ago and since then the average weight of the workforce has increased by around 19 per cent. In the graph below, the green line represents the weights of the offshore population in 1985 whilst the blue data curve represents the weight of the offshore population in 2009 and shows a significant shift in distribution to the heavier end of the spectrum. Furthermore, the heaviest individuals are proportionally even heavier.

**Figure 15: Average Weight of Males Travelling Offshore on the UK Continental Shelf**

Due to the considerable increase in the weight of offshore workers, it is vital that an up-to-date survey is completed in order to assess the changes in shape and size associated with this weight gain, informing the future design and layout of the offshore infrastructure and equipment, improving fit, comfort and safety for the workforce.

**Source:** Vantage POB, Oil & Gas UK
Oil & Gas UK, along with researchers from Robert Gordon University, is undertaking a study to measure the shape and size of the offshore workforce with backing and funding from a number of industry providers and the HSE. The study aims to measure a sample of 600 offshore workers using novel 3D scanning technology, generating a data set representative of the employees who travel offshore every year. The database generated by this study will be the largest of its kind within the UK industry and will include volumetric and linear dimensions. It is hoped that the data will go a long way in improving safety and comfort in a multitude of situations and environments offshore, from helicopter passenger survival suits to corridor widths on installations. A secondary part of the study is a dry egress test, which will be used, along with 3D data, to determine the measurement variables that can be used to predict an individual's ability to egress through a defined space.

A large proportion of the work conducted in 2013 involved developing a quick and reliable protocol for measurement collection using the 3D scanner. The study has now moved into its second and final year and offshore workers are being measured at locations around Aberdeen. Thanks to backing from Apache North Sea and the portable nature of the 3D scanner, the survey has also been taken offshore, providing the study team with a great opportunity to gain first-hand experience of the offshore environment. Strong emphasis has been placed on promoting the study and generating industry and workforce support through a series of presentations to companies, elected safety representatives, unions, and at the HSE and Step Change in Safety Workforce Engagement Support Team (WEST) launch event.

*Figure 16: Size and Shape Flyer and Poster*
4.5 Joint Auditing Initiative

In February 2013, Maersk Oil raised the possibility of joint supply chain auditing at a Health & Safety Forum meeting, having identified that many contractors and suppliers find themselves being audited by a range of clients (typically operators), duplicating effort and imposing an unnecessary burden on the supply chain companies. A group, established with facilitation from Oil & Gas UK, is exploring the development of a more collaborative approach whereby resources are pooled to carry out audits. The group comprises Maersk Oil, BP, BG Group, Centrica, CNR International, EnQuest and Shell. Work is ongoing to establish operating principles and protocols for joint auditing to meet the collective objectives, as well as improve audit arrangements and outcomes from both the operator and supply chain perspectives.

4.6 Helicopter Incidents

On 23 August 2013, there was a fatal accident involving a Super Puma L2 about two nautical miles west of Sumburgh off Shetland with 14 people rescued and four fatally injured. An update from the Air Accident Investigation Branch (AAIB) shortly after the incident reported that preliminary investigations indicated that there was “a reduction in airspeed accompanied by an increased rate of descent” approximately three miles from the runway at Sumburgh. It also said that the helicopter was intact and upright when it entered the water. The AAIB investigation is ongoing and the cause is not yet known.

4.7 Helideck Issues on Normally Unattended Installations

Oil & Gas UK’s normally unattended installation (NUI) steering group continued to work in 2013 on a number of helideck issues, taking a holistic approach to reducing the risk of a helideck crash. A project plan, reviewed by the UK Civil Aviation Authority (CAA), was developed for each NUI detailing planned and ongoing work to improve areas such as the obstacle environment, lighting and surface conditions. A bow-tie (hazard) analysis was also completed to show the full range of preventative, control and mitigation arrangements in place for a helicopter crash on the helideck. These arrangements will be subject to technical discussion and agreement from the CAA.
4.8 Helimet

The industry-developed online system for offshore weather reporting, Helimet, has had increased uptake in 2013 from both offshore installations and pilots. The CAP 437 compliant system, launched in 2011, now allows more than 100 offshore installations to collect and display real-time meteorological data from UKCS platforms and, in turn, helps to provide semi-automatic pre-flight weather reports to improve the safety of offshore helicopter operations. In the event of meteorological equipment failure on a platform, the system will automatically access data from nearby installations.

The map below shows the installations that record and send meteorological information. Colour coding is as follows:

- **Good weather conditions**
- **Wind speed above 40 knots**
- **Visibility 4,000 metres, wave height five metres, wind speed above 45 knots, cloud less than 600 feet**
- **Visibility less than 1,500 metres, waves greater than seven metres, wind speed greater than 60 knots, cloud less than 300 feet**
- **No available cloud or visibility data**

Work continues in 2014 to enhance the system; this is summarised in section 11.6 of this report.

*Figure 17: A Snapshot of the Helimet System Display Showing Weather Conditions at Offshore Installations*
4.9 Helideck Lighting

In response to recommendations made in the AAIB reports following the 2006 G-BLUN and 2009 G-REDU accidents, the CAA introduced a new helideck lighting standard, CAP 437 7th Edition, in 2013\textsuperscript{12}, which requires a lit touchdown circle and H on helidecks to provide visual cue improvements over traditional floodlighting. A successful in-service trial of the new lighting system on the Centrica CPC-1 platform demonstrated its effectiveness in distinctly marking the helideck for helicopter approach.

The CAA has now set a target for the new lighting systems to be fitted to all helidecks on the UKCS by 31 March 2018 with 50 per cent achieved by 2016. An industry work group comprising Oil & Gas UK, the CAA, the Helideck Certification Agency (HCA), and oil and gas operator representatives regularly meets with the lighting manufacturers to share experience and knowledge to expedite the installation process. To date, there are three manufacturers which are producing such systems, with the first installed on helidecks in early 2014. Work will continue in 2014, summarised in section 11.7 of this report, with oversight from the Step Change in Safety Helicopter Safety Steering Group (HSSG).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure18.jpg}
\caption{Circle and H Lighting System Fitted to the Centrica CPC-1 Platform}
\end{figure}

Photo provided courtesy of CAA

4.10 Pipeline and Riser Loss of Containment Database

Oil & Gas UK and the Energy Institute progressed work in 2013 to update the Pipeline and Riser Loss of Containment (PARLOC) report last published in 2003. Work over the last 12 months has focused on compiling and confirming pipeline incident data with operators dating back to 2001. This has now been completed and DNV GL has been appointed to assist in analysing the data and producing the report. Work continues in 2014 and is summarised in section 11.9 of this report.

\textsuperscript{12} The CAA standard CAP 437 7th Edition is available to download at www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=523
5. **Offshore Helicopter Transport Safety Record**

5.1 **Background**

Since 1976, commercial air transport helicopter flight statistics and reportable accident data for UKCS offshore operations have been collected by the CAA under its mandatory occurrence reporting (MOR) scheme. During this 38-year period up to year-end 2013, more than 64.5 million passengers have been transported to and from UKCS offshore installations with over 7.5 million flights made (sectors flown), consuming over 3.5 million flying hours. Regrettably, during this period, 13 fatal accidents have claimed the lives of 117 offshore workers and flight crew. There have been 60 non-fatal accidents.

To provide a report that is representative of today’s offshore flight operations using a fleet of modern helicopters, data for the last 20 years (from 1994 to 2013) have been used for comparative purposes. With this in mind and as a measure of current UKCS activity, in 2013, just over 131,600 sectors were flown consuming 77,200 flight hours and transporting over 1.1 million passengers offshore. Since 1994, four fatal accidents have claimed the lives of 38 offshore workers and flight crew and there have been 18 non-fatal accidents.

From 1994 to 2013, a large number of safety enhancements have been introduced to UKCS helicopter operations. These improvements have resulted from a number of industry-led initiatives and CAA research projects and are summarised in section 5.5.13.

5.2 **Current Helicopter Types**

At the end of 2013, the UKCS helicopter fleet numbered 97 aircraft and comprised a mix of airframe types. Current helicopter types used for UKCS offshore oil and gas support are shown in Figure 19.

**Figure 19: Current Helicopter Types used for UK Continental Shelf Offshore Oil and Gas Support**

<table>
<thead>
<tr>
<th>Type</th>
<th>Weight Class</th>
<th>Introduced</th>
<th>In fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurocopter AS365 N3 (Dauphin)</td>
<td>Medium</td>
<td>1979</td>
<td>4</td>
</tr>
<tr>
<td>Sikorsky S76</td>
<td>Medium</td>
<td>1980</td>
<td>7</td>
</tr>
<tr>
<td>AgustaWestland AW139</td>
<td>Medium</td>
<td>2005</td>
<td>17</td>
</tr>
<tr>
<td>Eurocopter EC155</td>
<td>Medium</td>
<td>2007</td>
<td>6</td>
</tr>
<tr>
<td>Eurocopter AS332 L (Super Puma)</td>
<td>Heavy</td>
<td>1982</td>
<td>7</td>
</tr>
<tr>
<td>Eurocopter AS332 L2 (Super Puma)</td>
<td>Heavy</td>
<td>Pre 2005</td>
<td>13</td>
</tr>
<tr>
<td>Eurocopter EC225 (Super Puma 2)</td>
<td>Heavy</td>
<td>2005</td>
<td>22</td>
</tr>
<tr>
<td>Sikorsky S92</td>
<td>Heavy</td>
<td>2005</td>
<td>21</td>
</tr>
</tbody>
</table>

13 For a full and detailed list of industry-led safety initiatives and CAA research projects see the appendix provided on the Oil & Gas UK website at www.oilandgasuk.co.uk/Health_Safety_Report_2014.cfm
It should be noted that for much of 2013 the EC225 fleet was suspended due to investigations following the ditchings in 2012, and thus the EC225 flew relatively few hours. During this time, some of the older AS332 L Super Pumas were brought back into North Sea operations to assist with providing cover.

Since 2001, only heavy and medium twin-engine helicopters have been used on the UKCS. This is because two-pilot, light helicopter operations generally don’t have sufficient range and payload to meet contemporary offshore commercial expectations.

It is also important to make the distinction between heavy and medium twin helicopter operations. As a rule it can be said that heavy twins (such as AS332, EC225 and S92) operate mainly out of Aberdeen or Scatsta (Shetland) and generally fly sectors (flight stages) with long flight times. Medium twins (such as AS365, EC155, S76 and AW139) fly mainly out of regional heliports (such as Blackpool, Humberside and Norwich) and these aircraft record a high number of sectors with relatively short flight times.

5.3 Offshore Helicopter Reportable Accidents on the UK Continental Shelf

All significant flight safety occurrences are reported to the CAA using the MOR scheme. There are a number of occurrence reports submitted every month, providing constant oversight of safety-related events. It is the MORs classed as ‘reportable accidents’ that are highlighted in this report.

From 1994 to 2013, four fatal accidents have claimed the lives of 38 offshore workers and flight crew. Two accidents were caused by catastrophic component failure and the other two attributed to human factors.

Eighteen reportable non-fatal accidents have also occurred since 1994. These include major component failures, pilot error, lightning strikes, major airframe damage, and main and tail rotor damage. In most cases only the helicopter was damaged but, infrequently, these accidents have resulted in injury to personnel.

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A complete listing of the 73 reportable accidents involving helicopters serving the UK offshore oil and gas sector from 1976 to 2013 is provided in an appendix on the Oil & Gas UK website at www.oilandgasuk.co.uk/Health_Safety_Report_2014.cfm
5.4 Accident Analysis

The graphs below illustrate the distribution of UKCS fatal and non-fatal reportable accidents from 1994 to 2013, as well as the offshore helicopter fatal and non-fatal accident rates per 100,000 flying hours.

Figure 20: UK Continental Shelf Accident Distribution

Figure 21: UK Continental Shelf Fatal and Non-Fatal Accident Rates per 100,000 Flying Hours

Source: Oil & Gas UK
A breakdown of reportable accidents from 1994 to 2013 is provided in the below graphs\textsuperscript{15}.

\textit{Figure 22: Breakdown of Reportable Accident Causes}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure22.png}
\caption{Accident Categories 1994 to 2013}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure23.png}
\caption{Technical Accidents 1994 to 2013}
\end{figure}

\textsuperscript{15} In order for accident events to be identified using a recognised international code, categorisation and causation follows the International Civil Aviation Organisation/Commercial Aviation Safety Team Common Taxonomy Team taxonomy.
Operational Accidents 1994 to 2013

- Controlled Flight into Terrain (CFIT) - 2
- Loss of Control - Ground (LOC-G) - 1
- Loss of Control - In Flight (LOC-I) - 1
- Ground Handling (RAMP) - 1
- Abnormal Runway Contact (ARC) - 2
- Collision with Obstacle(s) during Take-Off and Landing (CTOL) - 1

Source: Oil & Gas UK

External Accidents 1994 to 2013

- Windshear or Thunderstorm (WSTRW) - 6
- Aerodrome (ADRM) - 1

Source: Oil & Gas UK
From 1994 to 2013, operational causes have accounted for 36 per cent of the accidents, 32 per cent have been due to technical failures and another 32 per cent caused by external factors. Although the non-fatal reportable accident rate on the UKCS since 1994 represents a significant improvement over previous years, non-fatal accidents continue to occur with disappointing regularity with an occasional two-to-three-year period of respite.

Seventy-five per cent of operational accidents occurred during flight, all of which are attributed to pilot error. The remaining 25 per cent occurred on the ground.

Eighty-six per cent of the technical failures have been attributed to dynamic component failures (main rotor gear box, main rotor blade and tail rotor). A structural issue accounts for the remaining 14 per cent.

For the 32 per cent of accidents due to external factors, the majority (86 per cent) were the result of weather-related events, including five lightning strikes and an encounter with a water spout. The final accident accounts for the remaining 14 per cent and was a very heavy helideck landing caused by adverse helideck environmental effects (hot turbine exhaust plume).

In 2012, when two EC225 Super Pumas experienced main rotor gearbox failures, both flight crews were forced to execute a controlled ditching but, most fortunately, all persons on board were safely recovered.

Offshore helicopter accident rates on the UKCS have been compared with worldwide fatal and non-fatal reportable accident rates for the period 1995 to 2013 using data from the International Association of Oil and Gas Producers (OGP). This reveals that on average UKCS offshore helicopter operations carry significantly less risk than elsewhere in the world.

However, it is important to understand that helicopter operations in many of the global regions lack regulatory, management and equipment sophistication when compared with the UK. Also, on the UKCS, helicopter operations are exclusively two-engine, two-pilot operations, whereas, for example, in the US Gulf Coast region and elsewhere, there are a large number of small, single-engine and single-pilot operations. It is these types of operations that have the largest percentage of accidents.

**Figure 23: Comparison of Fatal and Non-Fatal Reportable Accident Rates, 1995 to 2013**

<table>
<thead>
<tr>
<th>Region</th>
<th>Fatal Accident Rates (per 100,000 flying hours)</th>
<th>Non-Fatal Accident Rates (per 100,000 flying hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worldwide</td>
<td>0.50</td>
<td>1.39</td>
</tr>
<tr>
<td>UKCS</td>
<td>0.26</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Source: Oil & Gas UK/OGP
5.5 Safety Improvements and Initiatives

Since the early 1980s, many safety initiatives and improvements to UKCS helicopter operations have been funded and fully supported by industry and the regulators (CAA and HSE). Some of the major achievements in recent years are listed below but they have not been given any order of priority or importance.

TCAS 2 Collision Avoidance System

A programme is under way on the UKCS to introduce an airborne collision avoidance system on all offshore helicopters. This system has the potential to eliminate conflicts between similarly equipped offshore helicopters and to reduce ‘air miss’ opportunities with other aircraft.

Extension of VHF Communications Coverage and Introduction of ‘Multilateration’ Flight Surveillance for the North Sea

In 2004, the UKOOA (now Oil & Gas UK) Aviation Safety Technical Group (ASTG) initiated a joint project with the National Air Traffic Service (NATS) to assess the efficiency and coverage of offshore helicopter VHF aeronautical communications and flight surveillance on the UKCS. The outcome of this review led to significant work and investment being made to upgrade and modernise offshore VHF aeronautical communications and the development and installation of a new ‘multilateration’ flight surveillance system which has significantly enhanced air traffic control on the UKCS. The new systems became operational in 2010 and the wide area multilateration was welcomed by air traffic controllers as a surveillance tool that is the equivalent of radar.

Meteorological Project – Helimet

In 2009, in response to a new CAA CAP 437 requirement, Oil & Gas UK led a project to provide a UKCS-wide semi-automatic meteorological recording and reporting network. The aim was to improve the accuracy of weather information used by offshore helicopter flight crews. This project entailed installing specialist meteorological equipment and software on designated hub installations and providing meteorological observer training for offshore personnel. The Helimet system became fully operational in 2012 and expansion and system upgrades continue. Initial and/or refresher training has been delivered to over 1,000 personnel since the system was introduced.

Helideck Lighting

Green perimeter lighting was adopted as an international standard on offshore helidecks following CAA field trials of new helideck lighting systems designed to enhance visual cues for landing at night. Green perimeter lighting has been in use on the UKCS for the last four years in conjunction with revised floodlighting.

The project also identified the significant benefits of lighting the aiming circle and ‘H’ marking. Following successful trials during winter 2012 to 2013, these new lighting systems are being installed on UKCS offshore helidecks.

Forecasting/Predicting Triggered Lightning Strikes

Responding to requests from industry, the CAA collaborated with the Met Office to investigate and demonstrate the feasibility of forecasting/predicting triggered lightning strikes on helicopters. Oil & Gas UK, the Norwegian CAA, CHC Helicopter and seven individual oil and gas companies have funded the project, for which initial work was completed in June 2011. The system has since been evaluated and improved via in-service trials during the winter 2011/12 and 2012/13 lightning seasons. Although further refinements have been identified, the system is considered mature and helicopter operators have requested that it be left running on the Met Office OHWeb weather information system.
Advanced Anomaly Detection for the Health and Usage Monitoring System

A programme began in 2009 to introduce advanced anomaly detection (AAD) to the health and usage monitoring system (HUMS) data from the UKCS offshore helicopter fleet. The outcome of a successful CAA research project, AAD improves on existing HUMS data analysis using data mining techniques and enhances the HUMS’ sensitivity to defects without increasing or even reducing the false alert rate. When fully implemented, HUMS defect detection rates may increase from about 65 per cent to 85 per cent. Since 2013, HUMS AAD for the most used helicopter types has been undergoing ‘controlled service introduction’.

5.6 Summary

The offshore oil and gas industry is of significant economic importance to the UK and could not operate efficiently without helicopters. These non-scheduled public transport operations on the UKCS take place in a hostile environment and, although the safety record is good for this type of operation (compared globally), it still experiences a higher accident rate than airline operations.

Since the beginning of oil and gas operations in the UK North Sea, the longest fatal accident-free period has been nine years, from 1993 to 2001. Despite having a fleet of some of the most up-to-date and technologically advanced helicopters, the most recent fatal accidents occurred in July 2002 (Sikorsky S76 in Leman Field), December 2006 (Eurocopter AS365 Dauphin at Morecambe Bay), April 2009 (Eurocopter AS332 L2 Super Puma off Peterhead) and August 2013 (Eurocopter AS332 L2 Super Puma on approach to Sumburgh). These tragic accidents serve as a constant reminder of the need for continuous improvement to minimise the risks.

The fatal helicopter accident in August 2013 once again reiterated to the industry the hazardous nature of offshore oil and gas exploration and production on the UKCS, when tragically, four people lost their lives and a survivor was seriously injured. The accident happened whilst on approach and within a couple of miles of Sumburgh Airport, causing the 14 survivors to endure a difficult rescue from hostile seas. This most recent event, along with three other fatal accidents since 2002 and three ditchings since 2009, serve to remind everyone that our industry safety record should be, in the first instance, measured in human terms and not just as a set of statistics. For that reason, readers are encouraged to keep this firmly in mind whilst reading this report.

These events reinforce the need for the UK oil and gas industry to continue to work with the helicopter operators, helicopter and safety equipment manufacturers, and regulators to further reduce risks. Risk reduction will only be achieved by collectively and vigorously pursuing current and future offshore helicopter safety initiatives and research projects and ensuring, where practicable, implementation of actions and recommendations arising from various inquiries and reviews from 2013 to 2014 (such as the CAA review) are expedited.
6. Regulatory Consultations

Oil & Gas UK continued to serve as the focal point for industry responses to regulatory consultations managed by the HSE. The following consultations were completed in 2013.

6.1 EU Offshore Safety Directive

As outlined in section 4.1 of this report, Oil & Gas UK and other like-minded industry organisations challenged the EC’s proposals for an EU Regulation on offshore safety and successfully campaigned that the interests of safety would be best served by a Directive. In June 2013, the EU Directive was published and since then Oil & Gas UK has supported the HSE and DECC’s efforts to transpose the Directive into UK legislation. The initial period of informal consultation focused on matters such as the potential impact of the Directive on UK Regulations and the proposed arrangements for a competent authority charged with enforcing the new legislation on the UKCS. Informal consultation will continue and will aid the development of new or revised Regulations. These will, in turn, be subject to formal consultation between June and September 2014.

6.2 The Health and Safety Executive’s Intervention Strategy

As referred to in section 4.2, the HSE’s Offshore Division was absorbed into a consolidated Energy Division in 2013. As part of that restructuring, the new Energy Division took the opportunity to review its approach to inspecting offshore installations to ensure that its resources are deployed to best effect. It sought to rank installations in a hierarchy that is based on hazard and risk criteria and which will, in turn, drive inspection frequency. Oil & Gas UK’s members worked with the HSE to develop the criteria for ranking and to help to communicate and test the proposed strategy and outcomes of the ranking exercise. The revised HSE Energy Division strategy, which includes details of the new inspection approach, was published in April 2014.

6.3 The Health and Safety Executive’s Inspection Guidelines

In developing an improved intervention strategy (see section 6.2 above), the HSE identified a number of specific topics that may form the basis of their future inspection activities, including temporary refuge integrity, verification, wells, control of work, asset integrity and pipelines. Formal inspection guides are being developed in these subject areas to focus efforts in a consistent, proportionate and productive way on the main hazards on an offshore installation. Oil & Gas UK helped the HSE to canvass industry views on its strategic inspection topics and has supported the HSE in producing the associated inspection guides.

16 The HSE’s offshore oil and gas sector strategy can be downloaded at www.hse.gov.uk/Offshore/offshore-oil-and-gas.pdf
6.4 The Health and Safety Executive’s Triennial Review

As a non-departmental public body (NDPB), the HSE has to undergo a substantive review by stakeholders at least once every three years. The purpose is to gain assurance from stakeholders that the functions delivered by the HSE continue to be necessary and that they are best delivered by an NDPB rather than by some alternative form of agency. The triennial review also requires stakeholders to consider and comment on the HSE’s efficiency and effectiveness in carrying out its duties and on its controls and governance.

The Oil & Gas UK submission on behalf of industry concluded that the HSE should continue as a NDPB and made a number of comments on its efficiency and effectiveness\(^{17}\).

6.5 Approved Codes of Practice

The Löffstedt review of health and safety legislation, published in November 2011\(^{18}\), recommended that the HSE reviews all approved codes of practices (ACOPs) within an agreed timetable. The initial review led to a more detailed review of a number of relevant ACOPs, and in 2013, the HSE sought industry views on proposed revisions to three established ACOPs, namely:

- Control of Substances Hazardous to Health Regulations 2002 (COSHH)
- Dangerous Substances and Explosive Atmospheres Regulations 2002
- Legionnaires’ Disease: the Control of Legionella Bacteria in Water (L8)

In line with the UK Government’s drive to reduce the legislative burden on industry while maintaining suitable standards of health and safety, the proposed revisions were all geared towards clarifying and simplifying the ACOPs.

Oil & Gas UK formed topic-specific work groups and sought members’ views, subsequently submitting industry responses that broadly supported the proposed revisions and offered only minor suggestions for improvement.

\(^{17}\) The outcomes of the HSE’s triennial review can be found at www.gov.uk/government/consultations/triennial-review-of-the-health-and-safety-executive

\(^{18}\) The Löffstedt report on health and safety legislation is available to download at www.gov.uk/government/publications/reclaiming-health-and-safety-for-all-lofstedt-report
7. **Oil & Gas UK’s Work in Representative Bodies**

Oil & Gas UK’s Health, Safety and Employment Issues Directorate manages a broad range of issues and co-ordinates the development of cooperative solutions on behalf of industry. This is achieved through a number of forums, networks and work groups. The directorate also actively participates in various other industry groups.

### 7.1 Oil & Gas UK’s Forums

#### Health & Safety Forum

The Health & Safety Forum is a centre for communication between Oil & Gas UK and member companies on a wide range of health and safety issues affecting the UK upstream oil and gas industry. It provides the industry with a platform to engage with the regulators and other stakeholders and proposes and supports research, studies and analysis to ensure appropriate health and safety improvement strategies and actions are developed. The Forum also provides a link to Step Change in Safety. Meetings are chaired by Oil & Gas UK and are held quarterly.

**Who attends?**
The Forum is open to all Oil & Gas UK full members and is attended by health and safety managers or advisors from both operator and contractor companies as well as those in occupational health roles.

**Examples of topics covered in 2013**

- EU Directive
- Aviation incidents
- Ageing and life extension
- HSE re-organisation and intervention strategy
- Size and shape study
- Occupational health
- Piper 25 conference

**Presentations by Forum Members**

- Learning from fatalities
- Safety observation systems
- Occupational health and stress management
- Causal learning

#### Major Hazards Management Forum

The Major Hazards Management Forum provides opportunities for members to share specialist knowledge, opinion and operational experience in relation to major hazard management.

**The forum tackles issues such as:**

- Strategies for major hazard management
- Influencing the HSE’s research plans through input to its research proposals and considering the practical implementation
- Remaining aware of hazard management developments in other major hazard industries
- Sharing specialist knowledge, opinion and operational experience to deliver guidance on major hazard management issues for offshore installations

**Who attends?**
The Forum is open to all Oil & Gas UK full members and is attended by technical safety specialists working in major hazard management. Work group members may invite external experts to address a particular topic.

**Examples of topics covered in 2013**

- RIDDOR Hydrocarbon Release Reporting Guidelines
- Risk-based decision framework
- Fibre-reinforced plastic gratings
- Accident and failure data
- Process safety awareness
- Piper 25 conference
## 7.2 Oil & Gas UK’s Networks

<table>
<thead>
<tr>
<th>Networks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ageing &amp; Life Extension (ALE)</strong></td>
<td>This network functions online only and provides a conduit for communication with duty holders and other stakeholders on ALE and KP4 related matters.</td>
</tr>
<tr>
<td><strong>Assurance &amp; Verification</strong></td>
<td>This network comprises assurance and verification practitioners from duty holder members and provides a mechanism for identifying and discussing industry-wide issues. This network meets quarterly to share lessons learnt and good practices. In December 2013, a meeting was held where the HSE and ICP were invited to discuss the relationship between the two and sit on a panel session to take questions from the network.</td>
</tr>
<tr>
<td><strong>Evacuation, Escape &amp; Rescue Technical Advisory Group (EERTAG)</strong></td>
<td>This network is designed to help spread the word from and provide input to EERTAG, an external representative body, and to involve the wider evacuation, escape and rescue community. It has attracted around 80 or so members in a short space of time and met once in 2013. The aim is that this network will primarily function online and will not meet unless a specific issue arises.</td>
</tr>
<tr>
<td><strong>Electrical Engineering</strong></td>
<td>This network is chaired by a member representative and comprises electrical engineers from duty holder members. It is largely self-managed and provides a mechanism for identifying and discussing industry-wide issues. This network meets regularly and recently published a technical note on <em>Guidance on Corrosion Assessment of Ex Equipment</em>.</td>
</tr>
<tr>
<td><strong>Occupational Health</strong></td>
<td>New for 2014, this group has been set up to promote and raise the profile of health (including nutrition); to share key issues and operational solutions; to facilitate networking; and to ensure that relevant and current health issues are represented within the Health &amp; Safety Forum and to link with the HR Forum.</td>
</tr>
<tr>
<td><strong>Offshore Structures</strong></td>
<td>This network consists of structural engineers from member companies. It primarily functions as an online community but has met occasionally to discuss specific issues and to explore industry-wide solutions to particular challenges.</td>
</tr>
</tbody>
</table>
7.3 Oil & Gas UK’s Work with External Groups

Figure 24: Examples of External Bodies on which Oil & Gas UK is Represented

The acronyms in the graphic are spelt out in the glossary in section 12 of this report.
## External Representative Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency Preparedness Offshore Liaison (EPOL)</strong></td>
<td>EPOL is an industry-led forum with membership drawn from Police Scotland, the Maritime &amp; Coastguard Agency, Oil &amp; Gas UK, and operator and contractor organisations. The group exists to improve offshore emergency response arrangements on the northern UKCS and west of Shetland. Sub-groups are formed to develop solutions to specific emergency response related challenges facing the industry.</td>
</tr>
<tr>
<td><strong>EERTAG</strong></td>
<td>EERTAG is a tripartite body of industry, regulator and trade union representatives, with Oil &amp; Gas UK providing part of the industry representation and the HSE providing secretariat support. The group meets twice a year to focus attention on emergency response and rescue matters affecting the industry.</td>
</tr>
<tr>
<td><strong>North Sea Offshore Industry Associations (NOIA)</strong></td>
<td>The NOIA consists of representatives from the national offshore oil and gas industry trade associations from Norway, the Netherlands and Denmark, with Oil &amp; Gas UK providing the UK input. The group has focused successfully on the mutual acceptance of emergency response training standards across national boundaries.</td>
</tr>
</tbody>
</table>
| **OGP Safety Committee** | OGP’s Safety Committee strives to make the global exploration and production industry as safe as practicable. The top areas of work over the last 12 months are:  
  - Definition of the Safety Committee’s five-year programme (planning ongoing)  
  - Publication of a report on *Shaping Safety Culture through Safety Leadership*[^21]  
  - Learning from the events workshop held  
  - Continued development of the methods to report and learn from occupational incidents |
| **UK Industry Forum (UKIF)** | The UK Industry Forum is chaired by Oil & Gas UK and consists of representatives from the Offshore Contractors Association (OCA), IADC, the Caterers Offshore Trade Association (COTA), the Offshore Petroleum Industry Training Organisation (OPITO), the HSE, trade unions and OPITO-approved training providers. The prime purpose of the group is to provide guidance and support to OPITO on the development of industry training standards. It provides a screening process for requests to change standards and exercises scrutiny and review of work undertaken to maintain OPITO standards. |

8. **Step Change in Safety**

We are grateful to Les Linklater, team leader, Step Change in Safety, for this summary of the organisation’s work during the last year.

Step Change in Safety delivered visible and credible safety improvements over the past year and remains a model of good practice in terms of collaborative working. This serves as a reminder that through this unique approach we can realise our vision of being the safest oil and gas sector in the world.

**Workforce Engagement**

In 2013, we had the sweeping success of the Piper 25 Workforce Involvement Day where, as an industry, we reflected, reinforced and recommitted ourselves to becoming the safest province to operate in the world. There was a contagious and tangible optimism in the wake of a conference that welcomed over 500 safety representatives, offshore workers and safety professionals. We came together to reflect on learnings, applaud best practice and recognise how far we have come in terms of safety performance. This event also provided the platform to premier the Step Change ‘Remembering Piper’ DVD which was broadcast live across the North Sea to allow the onshore and offshore workforce to come together.

With 146 worksites and over 10,000 responses to Step Change’s workforce engagement survey, the newly established Workforce Engagement Support Team (WEST) will build on the success of the Piper 25 Workforce Involvement Day. WEST will continue to drive efforts to ensure that our workforce is fully engaged in health and safety. The workforce engagement toolkit will be improved with an emphasis on increasing value proposition to employers. A dedicated workstream aims to increase the efficacy of our elected safety representatives and a further WEST group will focus on communicating what we are doing and how we are doing it.

**Helicopter Safety**

The Sumburgh helicopter crash in August 2013 was a devastating shock for the offshore industry. The leadership role that the Helicopter Safety Steering Group (HSSG) played in taking time out for safety gave us time to come together and better understand the issues supporting a return to service of the aircraft six days after the incident. The HSSG also played a key role in communications and workforce engagement, supporting the EC225’s return to service following the ditchings in 2012.

The HSSG will continue to be proactive in helicopter transport safety. The lessons learnt from the past two years mean that, moving forward, the group will be smaller and have a better balance of oil and gas and aviation members. This will allow us to focus on the issues that are most important. The prime objective is simple: no accidents. We must deliver safe flight operations, mitigate consequences and continue to communicate with and engage our workforce on and offshore.

**Competence and Human Factors**

Step Change in Safety met challenges around the Minimum Industry Safety Training (MIST) standard and still believes that the principle of having a universal minimum safety training standard provides a strong foundation. However, we recognise that the programme could and should be more effective and engaging.

Uptake of the Mechanical Joint Integrity programme continued at a pace with companies also adopting the standard in their downstream operations and around the globe. There are now over 6,000 people who have completed the training and nearly 1,500 who have completed the technical competence assessment.
Our focus on improvement will continue with the review of the MIST standard; developing a common industry competence framework; confronting safety critical task competence and addressing the question of safety leadership in a major accident hazard environment. We will also work to enhance our understanding and management of human factors through the deployment of a new self-assessment toolkit.

**Asset Integrity**

To ensure that asset integrity issues are effectively managed across our industry, the Asset Integrity Steering Group (AISG) set the challenging target of sharing lessons from all hydrocarbon releases in an effort to continue to reduce unplanned hydrocarbon releases by 50% per cent over the next three years. These targets present a huge challenge and we must tackle the obstacles that prevent us sharing learning more effectively.

In continuing the quest for continual improvement of safety standards and performance, we can draw confidence from our ability to reduce hydrocarbon releases by nearly half in the three-year period to March 2013; the overwhelming response to our workforce engagement survey; and the increased levels of engagement we’ve experienced in the last 12 months.

2014 will see a structural transformation of Step Change in Safety, built on a stronger organisational and constitutional model. Combined with a stronger ownership model, the constitution will provide a truly tripartite body that is working together to continuously improve our safety performance. We will also better define the interfaces with Oil & Gas UK to avoid duplication of effort.

Step Change in Safety will continue to provide strong and sustainable leadership in health and safety to drive our shared goals. It is important that we maintain a simplified agenda, improve engagement at all levels and continue the focus on implementation, while recognising the growing number of members who are playing their part in our leadership team, steering groups and work groups.

For further details of Step Change in Safety’s 2013 activities and forward plans, please see the Step Change 2014 Annual Update.

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22 Step Change in Safety’s *Annual Update* is available to download at  
www.stepchangeinsafety.net/knowledgecentre/publications/publication.cfm/publicationid/112
9. Publications

A key function of Oil & Gas UK is to lead or support the development of industry guidelines and to promote the sharing of good practice and information. Guidelines are typically developed by appropriate volunteers drawn from member companies and supported by Oil & Gas UK staff. This section summarises recently published health and safety related documents.

9.1 Supplementary Guidance on the RIDDOR Reporting of Hydrocarbon Releases

Issue 2 published in April 2014 provides guidance to duty holders on assessing HCRs reportable under RIDDOR. The guidance is an update on an earlier document and is designed to achieve consistent, reliable, legally compliant regulatory reporting of HCRs. In addition to the publication, the work group produced an Excel-based assessment tool to enable reliable and consistent application of the methodologies used to set reportable limits. They also provided presentation material to help ensure consistent roll-out of the guidance23.

9.2 Guidance on the Management of Ageing and Life Extension

Work groups were established in 2012 to develop technical guidance that supplements and underpins the Oil & Gas UK management system level guidance on ALE published in April 2012. The priority subject areas for technical guidance were identified by reference to the HSE’s KP4 interim inspection findings as areas of common deficiency or need for improvement. That work has resulted in the publication of the following ALE documents24:

- Guidance on the Management of Ageing and Life Extension of Offshore Structures
- Guidance on the Management of Ageing and Life Extension Aspects of Electrical, Control and Instrumentation Equipment
- Guidance on the Management of Ageing and Life Extension of UKCS Floating Production Installations

The documents follow a broadly similar structure and are designed to help the industry identify significant ALE issues and challenges; the likely effects of ageing; the consequences of unmanaged ageing effects; the control and mitigation actions required; and life extension considerations.

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23 The guidance and supporting documents are available on the Oil & Gas UK website at www.oilandgasuk.co.uk/reporting-hydrocarbon-releases.cfm
24 The documents are available to download at www.oilandgasuk.co.uk/Technical_Guidance.cfm
10. Oil & Gas UK Health and Safety Events from 2013 to 2014

A range of events are organised throughout the year to encourage sharing of information and learning of important issues. Health and safety events from the last 12 months include:

**PIPER 25**

**June 2013** – To mark the 25th anniversary of the Piper Alpha disaster, Oil & Gas UK held a major three-day conference on offshore safety. The event brought people from across the global industry together to reflect on the lessons learnt over the past 25 years and to reinforce industry commitment to continuous improvement in safety. The keynote address was given by Lord Cullen, with a number of distinguished speakers including Judith Hackitt CBE, Professor Andrew Hopkins and The Hon. Sir Charles Haddon-Cave.

**Occupational Health Seminar**

**October 2013** – Following the success of the 2012 occupational health seminar, a similar event was held in 2013. The morning session focused on continued learning with presentations on approaches to occupational health strategy, wellness of offshore workers and potable water. The afternoon session featured presentations on food-borne illnesses and norovirus offshore. The keynote address was delivered by Professor Hugh Pennington, Emeritus Professor of Bacteriology at the University of Aberdeen.

**Doctors’ Training Workshops**

**Throughout the year** – This is a preparatory training course to ensure that examining doctors have sufficient knowledge of the UK offshore oil and gas industry to undertake Oil & Gas UK medical examinations. The workshops, held throughout the year, attract attendees from oil and gas regions all around the world where Oil & Gas UK’s medical standards are adopted. Nine workshops were held in 2013, with 160 delegates attending and representing a 45 per cent increase on 2012. Delegates travelled from 37 different countries to attend.
EU Directive Seminar

**February 2014** – Following on from the EU Seminar held in 2012, this event provided valuable insights into the prospective changes to UK safety and environmental offshore legislation to implement the EU Directive on safety of offshore oil and gas operations. Speakers at the event included senior representatives from the HSE, DECC and IADC.

UK Oil and Gas Industry Safety Awards

**April 2014** – The annual UK Oil and Gas Industry Safety Awards ceremony celebrates the achievements of people and organisations that have made outstanding contributions to the safety of the UK offshore oil and gas industry. The winners of the 2014 Awards are:

- **Safety Leadership** – Paul Craig, North Star Shipping
- **Safety Representative of the Year** – Bob Egan, Petrofac
- **Preventative Safety Action** – Derek Smith, Wood Group PSN
- **Most Promising Individual** – Ruth Pirie, Fisher Offshore
- **Innovation in Safety** – The North Sea Production Company
- **The Ideas in Safety Prize** – Bronson Larkins, BP
- **Workforce Engagement** – Andy Nolan and the Talisman HSE&A Team
- **Health (new for 2014)** – Sodexo
- **Services to Safety** – Steve Walton (awarded posthumously)

Key Programme 4 Seminar

**May 2014** – The HSE’s KP4 programme has focused three years of intensive inspection effort on the industry’s management of ALE and, in May 2014, the HSE published its findings from the inspection programme. This seminar provided a unique opportunity to hear first-hand details from the final report and to gain an appreciation of the industry position on ALE.
Examining Doctors’ Conference

**May 2014** – This year’s event featured presentations on the following topics:

- Novel approaches to the Oil & Gas UK medical examination – experience from current ‘trials’
- North Sea helicopter safety and implications of the CAA safety recommendations
- Revised guidance on obesity
- Revised guidance on anticoagulants
- Guidance on managing nicotine use offshore
- Intrinsic safety of electrical devices
- The revised Oil & Gas UK recommended minimum medication list

Aviation Seminar

**June 2014** – The focus of 2014’s annual seminar was on how to rebuild confidence in UK offshore helicopter safety. With five accidents over the past five years having left their indelible mark on the offshore workforce, the seminar looked at what more can be done to ensure the safety, efficiency and reliability of offshore helicopter operations.
11. **Focus Areas for 2014**

11.1 **European Union Safety Directive**

Work will continue throughout 2014 to transpose the EU Safety Directive into UK law so that new UK offshore Regulations come into force by the required deadline of 19 July 2015. Formal consultation on the proposals to implement the Directive will take place from June to September 2014, with final drafts of new Regulations prepared by the end of November.

The formal consultation process has been aided greatly by extensive prior engagement between Oil & Gas UK, the HSE and DECC. This informal consultation and collaboration between industry and the regulators over the past year has helped ease the legislative development process and should ensure that there are no real surprises in the draft Regulations.

Informal engagement has also enabled duty holders to prepare themselves for the future legislative changes and should make implementation more straightforward. It is anticipated that regulatory guidance will be published in March 2015 and that existing Oil & Gas UK work groups will remain in place to support industry’s adoption of the new Regulations and to respond to any industry-wide issues arising from their implementation.

11.2 **Ageing and Life Extension**

The HSE closed out its KP4 inspection programme in December 2013 and issued findings in May 2014. Although KP4 inspections have drawn to a close, the industry’s focus and management of ALE will continue as it is an integral element of asset integrity management.

Work already completed as part of the industry’s response to KP4 provides a solid foundation for a sustainable and effective long-term approach to ALE management. Issues arising from the final KP4 report will also require some form of industry response. Most will necessitate response or improvement action at duty holder level, but there will be cross-industry areas that require a more concerted and collective approach which Oil & Gas UK will help facilitate.

Oil & Gas UK will also complete delivery of its suite of technical ALE guidance documents to supplement the management system level guidance published in 2012. The HSE will maintain a focus on ALE management as part of its strategic intervention programme outlined in section 6.2.

11.3 **Guidelines**

A number of existing UKOOA/Oil & Gas UK guidelines are several years old and require a review to determine their currency. Where there are compelling reasons, work will commence to update these documents in 2014. The following guidelines will be reviewed over the next 12 months:

- Fire and Explosion Guidance
- Guidelines for the Management, Design, Installation and Maintenance of Small Bore Tubing Systems
- Guidelines for Safety Related Telecommunication Systems on Fixed Offshore Installations
- Guidelines for Environmental Health for Offshore Installations

A Major Hazards Management Forum work group activity to revise the *Industry Guidance on a Framework for Risk Related Decision Support* is also nearing completion and publication of the new guidance is scheduled for later in 2014.
11.4 Size and Shape of the Offshore Workforce

The current focus is to complete data collection from all 600 workers this summer, with strong support from operators and large contractors. Each data set will then be analysed and a series of measurements recorded to create a database, as well as generate 3D mannequins that are representative of the varying offshore workers’ physiques. The data will also be used to determine the morphological characteristics that best predict egress through a given space and to develop a learning tool that can be used by others to conduct further scanning studies.

Furthermore, with the recent CAA recommendations (see section 11.5 below) with regards to helicopter capacities and passenger size, it is important that any forthcoming actions are informed by an accurate and representative snapshot of the workforce, ensuring they are reasonable and safe for all personnel. An additional study is being proposed to run alongside this project to focus more specifically on the compressibility of clothing and soft tissue, and also shoulder flexibility in both men and women. Data from both studies would be used to determine the relationship between body size, flexibility and egress through apertures of a certain size and shape to help the industry determine how best to implement the CAA’s recommendation. The supplementary work associated with the CAA report will be managed by the Step Change HSSG, but will maintain appropriate linkage with the current Oil & Gas UK/Robert Gordon University project.

11.5 CAA Review of Offshore Helicopter Safety (CAP 1145)

The fatal accident on 23 August 2013 (outlined in section 4.6) prompted a review of UK helicopter operations and performance by the CAA. The CAA carried out its review in conjunction with the Norwegian CAA and the European Aviation Safety Agency and published its findings (CAP 1145) on 20 February 2014. CAP 1145 proposes a series of actions and makes a number of important recommendations, several of which are directed at the industry.

Oil & Gas UK has a constructive working relationship with the CAA and the focus has been to assess the actions and recommendations and to consider the industry approach to implementation. Industry impact assessments have been carried out to review the wider effect on safety and operations. As a result, the CAA has announced changes to two of its requirements following discussions with industry, helicopter operators, representatives of the offshore workforce and pilots. Firstly, the regulator has delayed its deadline for introducing seating restrictions on offshore flights from 1 June 2014 to 1 September 2014. These restrictions will mean that from September, unless improved emergency breathing systems (EBS) are provided, only passengers who are seated next to a push-out window exit can fly. The deferral of the June deadline reflects evidence from the industry that reducing helicopter capacity through seating restrictions would have had an adverse impact on safety critical maintenance work planned for offshore installations over the summer, and that the first improved breathing system units – which would remove the need for seating restrictions – wouldn’t be available before mid-July. The second change is that the EBS will now be compulsory from 1 January 2015 instead of 1 April 2016.

There are a number of other priority actions for the industry to resolve with the CAA, including clarity on sea state limitations for helicopter flights; normally unattended helideck safety; and the compatibility of passenger body sizes with the emergency exit size. Regular discussions on all these matters and related issues will continue directly with the CAA, both with the CAA-led Offshore Helicopter Safety Action Group and supporting subgroups.
11.6 Helimet

Work will continue in 2014 to further improve uptake of the Helimet system by both pilots and offshore installations. There will also be a focus on data quality, offshore meteorological equipment maintenance and how to improve the system’s functionality going forward. Given its importance for safe flying, it is essential that there is a high level of confidence in the system.

11.7 Helideck Lighting

Oil & Gas UK will continue to monitor the certification progress of the circle and H helideck lighting systems currently under production and look to engage with further manufacturers entering the market. Step Change in Safety’s HSSG will monitor implementation and work with industry to expedite the fitting of the systems to helidecks across the UKCS.

11.8 Helideck Issues for Normally Unattended Installations

Dialogue with the CAA will be ongoing throughout 2014 to resolve the ongoing issues surrounding NUI helideck safety. The risk bow-tie analysis developed by industry will be provided to the CAA to demonstrate the number and depth of the preventative, control and mitigatory measures currently in place. This work will be progressed in the wider context of CAP 1145.

11.9 Pipeline and Riser Loss of Containment Database

Following the successful collection of data in 2013, the focus is now to analyse the information and produce an up-to-date PARLOC report. Oil & Gas UK and the Energy Institute will be working closely with the industry steering group and DNV GL to progress this work. The report will follow a similar format to PARLOC 2001 with publication later in the year.

11.10 Relationship with Step Change in Safety

A number of key stakeholder groups expressed concern that there was a lack of clarity around the interfaces between Step Change in Safety and Oil & Gas UK, and the respective roles and responsibilities of the two parties. At an Oil & Gas UK Board meeting in February 2014, it was agreed that Step Change in Safety’s corporate status should change from being an Oil & Gas UK subsidiary company to being a fully separate and independent company. Work is under way to establish the necessary corporate governance arrangements and the other practical aspects of that change, and to allow the health and safety workload allocation to be assigned to the appropriate organisation. The revised working arrangements and workload split is still subject to consideration but is likely to be along the following lines:

- Step Change in Safety should take the lead on all health and safety matters where the objective is to develop common standards, processes and procedures; cross-industry good practice guidelines and toolkits; and to share good practice.
- Oil & Gas UK, in the form of its Health, Safety and Employment Issues Directorate, will continue to work on a range of health and safety issues outside the Step Change in Safety remit. Examples of such work may be regulatory consultation (including proposed regulatory changes); response to formal enforcement action; interpretation of regulations; industry advocacy, etc. Where an issue affects solely the duty holder community, as opposed to the whole industry, Oil & Gas UK will lead the agreed work stream and may form ‘task and finish’ work groups for that purpose.

Oil & Gas UK is also represented on the Step Change in Safety Leadership Team and will continue to offer that perspective through this group and by participation in the various steering groups and work groups.
12. **Glossary**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AAD</td>
<td>Advanced Anomaly Detection</td>
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<td>AAIB</td>
<td>Air Accident Investigation Branch</td>
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<td>ACOP</td>
<td>Approved Codes of Practice</td>
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<td>AISG</td>
<td>Asset Integrity Steering Group</td>
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<td>ALE</td>
<td>Ageing and Life Extension</td>
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<td>ASTG</td>
<td>Aviation Safety Technical Group</td>
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<td>CAA</td>
<td>Civil Aviation Authority</td>
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<td>COSHH</td>
<td>Control of Substances Hazardous to Health</td>
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<td>COTA</td>
<td>Caterers Offshore Trade Association</td>
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<td>DECC</td>
<td>Department of Energy &amp; Climate Change</td>
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<tr>
<td>EBS</td>
<td>Emergency Breathing System(s)</td>
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<td>EC</td>
<td>European Commission</td>
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<td>EER</td>
<td>Evacuation, Escape and Rescue</td>
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<td>Evacuation, Escape and Rescue Technical Advisory Group</td>
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<td>EPOL</td>
<td>Emergency Preparedness Offshore Liaison Group</td>
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<td>EU</td>
<td>European Union</td>
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<td>HCA</td>
<td>Helideck Certification Agency</td>
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<td>Hydrocarbon Release(s)</td>
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<td>Health and Safety Executive</td>
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<td>Helicopter Safety Steering Group</td>
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<td>HUMS</td>
<td>Health and Usage Monitoring System</td>
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<td>IADC</td>
<td>International Association of Drilling Contractors</td>
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<td>Independent Competent Person(s)</td>
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<td>KP4</td>
<td>Key Programme 4</td>
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<td>KPI</td>
<td>Key Performance Indicator(s)</td>
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<td>MIST</td>
<td>Minimum Industry Safety Training</td>
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<td>MOR</td>
<td>Mandatory Occurrence Reporting</td>
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<td>NATS</td>
<td>National Air Traffic Service</td>
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<td>Non-Departmental Public Body</td>
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<td>NUI</td>
<td>Normally Unattended Installation</td>
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<td>OCA</td>
<td>Offshore Contractors Association</td>
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<td>OGP</td>
<td>International Association of Oil and Gas Producers</td>
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<td>OPITO</td>
<td>The Offshore Petroleum Industry Training Organisation</td>
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<td>PARLOC</td>
<td>Pipeline and Riser Loss of Containment</td>
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<td>POB</td>
<td>Personnel on Board</td>
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<td>RIDDOR</td>
<td>Reporting of Injuries, Diseases and Dangerous Occurrences Regulations</td>
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Notes
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