**Health and Safety Executive Board**

**Meeting Date:** 7 December 2016  
**FOI Status:** Open  
**HSE/16/A07**  
**TRIM Ref:** 2016/466175

## AGENDA

**HSE Board meeting 7 December 2016**  
**Location:** City and Cathedral Rooms, Rose Court, London

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<th>Time</th>
<th>Session</th>
<th>Paper ref</th>
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| 11:00 | Welcome and introductions  
Declarations of interest  
Minutes of meeting 2 November 2016  
Matters arising - Action Log     | HSE/16/M06 HSE/16/AL           | Chair                              |
| 11:10 | Chief Executive’s Report                                                 | HSE/16/46                      | Richard Judge                      |
| 11:25 | HSE Board Transparency                                                   | HSE/16/47                      | Peter McNaught                     |
| 11:35 | Industry Sector Plans                                                    | HSE/16/49                      | Philip White                       |
| 12:05 | HSE’s Health and Work Strategy                                           | HSE/16/48                      | Peter Brown                        |
| 12:35 | Ionising Radiation Consultation Package - transposition of the Basic Safety Standards Directive for protection from exposure to ionising radiation (BSSD) 2013/59/EURATOM | HSE/16/50                      | Kären Clayton & Clare McNicholas   |
| 12:45 | Health and Safety (Miscellaneous Amendments and Repeal) Regulations 2017 | HSE/16/51                      | David Snowball                     |
| 12:55 | Outcome of second consultation on the proposal to introduce The Freight Containers (Safety Convention) Regulations 2017 | HSE/16/52                      | Philip White                       |
| 13:05 | AOB                                                                     |                                 |                                    |
| 13:10 | Meeting ends                                                            |                                 |                                    |

**13:10 – 13:45**  
**Lunch**
Chief Executive’s Report

This report highlights recent HSE activities and achievements that take forward the Core Aims set out in our Business Plan for 2016/17 and support that sustained strong performance. The recent statistics published last month show that Great Britain’s performance in workplace health and safety remains one of the strongest in the world.

Lead and engage with others to improve workplace health and safety

Help Great Britain Work Well (HGBWW) strategy Commitments launch: We hosted an event at the Imperial War Museum last Thursday. Our Minister, Penny Mordaunt, joined us, together with over 200 guests covering a breadth of sectors and interests. We recognised over 100 commitments made by industry, unions and other groups to play their part in improving health and safety in their workplaces and industries. Encouraging wider ownership of this agenda is a core part of “Helping GB work well”.

Upcoming consultation on Industry Sector Plans (formerly known as Sector Strategies): We have spent recent months developing our priorities and associated actions across industry sectors – Industry Sector Plans – which set the basis for our regulatory activities over coming years. They refresh and update the existing sector strategies, and draw together other elements (for example Helping GB Work Well).

Provide an effective regulatory framework

Partnership on Health and Safety in Scotland (PHASS): PHASS has completed development of a new Scottish Plan of Action on Safety and Health (SPIASH). It is intended to be a rolling programme of action over several years and has an initial set of actions (many contributing to HGBWW) ranging from establishing a Scottish network of standardised workplace support for SMEs to working with one of Scotland’s NHS Boards on management of work-related stress.

Collaborative working with Health Inspectorate Wales (HIW): A memorandum of understanding (MOU) between HSE and HIW was signed in April. Further work to embed this MOU with HIW is planned as a programme of proactive local inspections of Health Boards in Wales where intelligence suggests risks are not well controlled. At a reception for HGBWW nine commitments were made by organisations in Wales; and Science Division is in discussions with the health board covering North Wales regarding strengthening health and safety management arrangements.

Post Implementation Reviews of new regulations: We have recently delivered the first of these reviews by HSE. It was a review on the Control of Asbestos Regulations (CAR) 2012. This will be subject to scrutiny by the Regulatory Policy Committee and Reducing Regulation Committee, then published as a command paper and laid in Parliament.

EU Business: We will continue to meet our EU health and safety obligations while the United Kingdom remains a member of the EU. What place health and safety has in Brexit will be decided as part of the UK approach and objectives for the exit negotiations. We are
happy to receive views from stakeholders on what they think should happen to health and safety to help inform any future discussions.

Secure effective management and control of risk

**Securing compliance with the law:** We completed [316 prosecutions](#) between 1 April and 31 October 2016, including 8 prosecutions with individual fines over £1 million:

- **Foodles UK Ltd** – accident on the Star Wars film set (£1.6m)
- **Merlin Attractions Operations Ltd** – rollercoaster accident at Alton Towers (£5m)
- **Balfour Beatty** – collapsed trench (£2.6m)
- **Tata Steel UK Ltd** – amputation after machinery accident (£1.8m)
- **Cristal Pigment UK Ltd** – fatality following release of toxic vapour (£1.8m)
- **Scottish Power Generation** – serious burns after steam release from valve (£1.75m)
- **Tarmac Trading Ltd** – two road traffic accidents involving pedestrians, one resulting in a fatality (£1.3m)
- **Parker Hannifin Manufacturing Ltd** – fatality when moving machine in the factory (£1m)

Two areas where we are delivering a sustained focus on major health risks are:

1. **Respirable Crystalline Silica (RCS):** RCS is found in stone, sands and clays and inhaling can lead to serious health effects including silicosis, chronic obstructive pulmonary disease and lung cancer. Senior Labour Inspectors’ Committee (SLIC) members from 7 EU regulators (including HSE) collaborated on guidance for construction inspectors on RCS. The guidance was launched on 27 October and will be translated into all EU languages. Initial reaction was positive and included mention in a conference address by a Dutch Minister.

2. **Legionella:** HSE collaborated with Public Health England (PHE), NHS England and The Medicines and Healthcare products Regulatory Agency after an urgent update was identified to guidance for NHS staff on Legionella infection risks from heater cooler units used in cardiac surgery. We are also working collaboratively with PHE and Industry to review the current recognised method of testing environmental samples for legionella.

   Also businesses with legionella hazards were inspected to assess whether expected risk controls were in place, and whether necessary risk management improvements had been embedded following a significant programme of inspections several years ago.

   HSE is updating guidance to address an increase in Legionnaires’ disease outbreaks and fatalities linked to the proliferation and use of domestic-type spa pools and hot tubs used as part of a business activity.

**Construction inspection initiatives:** HSE carried out an intensive inspection initiative during the periods June/July and October/November 2016, targeting small refurbishment projects. 1840 sites were visited and 2235 contractors were inspected during the initiative. Our inspectors found 49 per cent of sites fell below standards required to comply with health and safety requirements and served 741 enforcement notices and 1059 notifications of contravention – an 8% increase on the 2015 initiative. In common with previous initiatives, inspectors had to deal with a number of immediate risks, especially
poorly managed work at height, and also significant health risks where workers were exposed to asbestos and dusts, particularly silica and wood dust.

**Reduce the likelihood of low-frequency, high-impact catastrophic incidents**

**Gas Safety (Management) Regulations 1996 (GSMR):** HSE granted five exemptions under GSMR to enable National Grid Gas plc to implement a major business restructuring. The exemptions were granted after HSE was reassured that there would be no diminution of existing health and safety standards.

**COMAH Strategic Forum:** this provides industry and regulators with a means for strategic discussion on how they can work together to provide leadership and encourage continuous improvement in the inspection, management, and control of major accident hazards across the onshore industries. In the last 6 months the Forum and its working groups delivered a range of activities aimed at sustaining and improving major accident management. These include guidance aimed at sharing process leadership principles with a wider community beyond the Forum membership; discussions on public reporting of COMAH operators’ performance, and HSE is leading on developing a web community to facilitate this work.

**Oil and gas sector:** we continue to actively engage with industry bodies and other regulators to ensure an ongoing focus on safety. We will shortly commence publication of offshore inspection scores and are delivering a risk-based intervention programme focused on key risks at all 52 highest category offshore sites.

**Emerging risks:** we are building on the work of other government departments to assess the potential changes to the risk profile of the major hazards sector from an increased risk of cyber-attack.

**Other specialist industries:** HSE has engaged the Synthetic Biology Leadership Council (SBLC) and its Governance Subgroup on governance arrangements for synthetic biology. We have used this to develop the bioeconomy Industry Sector Plan; secure the SBLC commitment to HGBWW; and inform HSE’s contribution to international discussions on synthetic biology within the EU and the United Nations Convention on Biological Diversity. Moving forward, we are building competence in its scientific advisory committee by recruiting experts in synthetic biology.

**Other matters:**

On 4 October 2016, one of our colleagues suffered serious burns whilst setting up an experimental hydrogen test rig at our Buxton site. Regulatory inspectors are investigating the incident and have served a Crown Improvement Notice. We are working with them to ensure compliance with the Notice. Separately we have carried out our own internal investigation to establish the immediate and root causes of the incident. We have already taken action to deal with the immediate causes and will be considering what further action is necessary and what lessons to learn from this incident.

And finally, the work our Data Analytics Team (with Ordnance Survey and others) to support emergency response to major incidents was a runner-up in the “The Analysis and Use of Evidence” category at the Civil Service Awards held on Thursday 24 November. The successful consultation and launch events of the Helping BG work well strategy, which took place at the start of 2016, was one of the winners at the Public Sector Communications Awards in November.
Title: HSE Board Transparency
Sponsor: Peter McNaught

FOR DECISION

The Board is invited to consider and agree the proposal at paragraphs 4 and 5 to enhance the HSE Board’s openness and transparency.

KEY INFORMATION

Background

1. HSE has been committed to being an open and transparent organisation for many years. The Health and Safety Commission (HSC) first held open meetings in 2003 and the HSE Board continued to do so when it was created in 2008. This approach provided a balance between transparency and the need for the Board to discuss certain issues in private. Stakeholders/members of the public were invited to register to attend and observe Board discussions, but not participate. Papers for open meetings are available on HSE’s website and some stakeholders send comments on papers to Board members to be considered or raised at the meeting.

2. During 2016, the number of open Board meetings significantly reduced from a norm of 6-8 open meetings to two. This was largely due to less policy-related issues being raised for the Board’s consideration and the need to structure inductions for new Board members around the meetings. However, this year HSE has also held a number of stakeholder engagement events, such as the HGBWW events in February and the Wales stakeholder event, which have proved very successful.

Proposal

3. In reviewing how the HSE Board should deliver its commitment to openness and transparency, we looked at similar arm’s length bodies’ approach to open Board meetings, which varied significantly. Of the seven ALBs considered, three held between four and 10 open meetings annually. The others had no open meetings but published agendas, minutes (one with redactions) and papers or a combination of these on their websites. Two also provided video recordings of the meetings online. The types of items discussed during open meetings and published in minutes also varied.

4. Drawing on the success of the 2016 stakeholder events, it is proposed that the Board should hold four Board meetings each year with a mostly open agenda and which are linked to a stakeholder engagement event. The open meetings would work as they currently do –
stakeholders would register to attend and observe meetings. Open papers would be published on HSE’s website ahead of the meeting. The stakeholder events could be a combination of invited stakeholders and those who notify in advance. Presentations to stakeholders on performance and other topical items could be given. The remaining three Board meetings and annual planning event in 2017 will be closed.

5. To ensure that a cross-section of stakeholders have an opportunity to meet the HSE Board, the open meetings and events will be held in different locations in Great Britain (GB). See proposed dates and venues for 2017 open meetings in attached Annex.

6. The Board is invited to agree this proposal.

FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES

7. If the Board supports the proposal to hold meetings and events across GB there may be additional costs in relation to venues – most HSE offices will not be able to accommodate these events. To mitigate this we will source other public sector building venues.

8. In the last three years, attendance at open Board meetings has been variable, ranging from no external attendees at most Bootle meetings to good attendance (10-15 observers) when meetings are held in London or in the devolved administrations. We will keep this new approach under review to ensure that it continues to add value both for HSE and stakeholders.

HANDLING AND COMMUNICATIONS

9. If the Board agrees the new approach, we will amend the Board dates on HSE website to indicate which Board meetings will include a stakeholder event. In the meantime, we will continue to confirm HSE and the Board’s commitment to transparency and engagement.
Proposed dates and venues for 2017 open Board meetings and stakeholder events

<table>
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<tr>
<th>Date</th>
<th>Proposed venue</th>
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<tr>
<td>Thursday, 16 March</td>
<td>Bootle (Redgrave Court)</td>
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<tr>
<td>Tuesday/Wednesday, 6/7 June</td>
<td>Regional (tbc)</td>
</tr>
<tr>
<td>Wednesday/Thursday, 6/7 September</td>
<td>Aberdeen (tbc)</td>
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<tr>
<td>Wednesday, 5/6 December</td>
<td>London (tbc)</td>
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Title: Industry Sector Plans

Sponsor: Selvin Brown – Director, Engagement & Policy Division

FOR DECISION

The HSE Board is invited to:

- consider the draft Sector Plans for different industry sectors and agree to them being used for wider engagement across the health and safety system
- discuss the programme of proposed engagement activities

KEY INFORMATION

1. HSE’s incident selection criteria and enforcement policies provide the framework for directing reactive work. For proactive work, key health and safety priorities and problems are identified in industry sector strategies and effort targeted where it is most required and/or where it could be most effective.

2. The current priority sector strategies were first developed and published in 2010 in response to the then health and safety strategy Be Part of the Solution. They were subsequently refreshed in 2012 and 2014. The publication of Helping Great Britain work well (HGBWW) has provided an opportunity to set out afresh HSE’s strategic priorities and actions across different sectors.

3. Working across HSE, a detailed evidence base for each sector has been built up through an analysis of the latest ill health and incident statistics, enforcement data, progress in performance across the system and for sectors, the economic position of the sector, industry trends and changes, the influence and importance of stakeholders, operational insight including the experience of what works and future trends. This was carried out alongside the development of the Health and Work Strategy.

4. Two page Sector Plans were developed from the evidence base to keep them aimed at multiple audiences - sector and system stakeholders, members of the public, Ministers etc. Alongside summarising progress on health and safety performance, each plan identifies 3-5 year strategic priorities and actions captured under the most relevant headings from HSE’s Annual Plan. The level of detail varies across Plans, reflecting each sector’s strategic priorities, progress in performance, maturity, risk profile, likelihood of success and impact.

5. The new Sector Plans cover all relevant employment sectors, not just priority areas for HSE. There is an increase in the number from 16 to 19 and some former sectors brigaded. This reflects industry developments eg. fracking in the onshore oil and gas sector. They have a consistent look and feel to other
6. The actions proposed are strategic. However, the specific activities, work and timings to deliver the strategic actions will be brought together in HSE’s Annual Plan and Divisional work plans under the headings of:
   • lead and engage with others to improve workplace health and safety
   • provide an effective regulatory framework
   • secure effective management and control of risk
   • reduce the likelihood of low-frequency, high impact catastrophic incidents

7. Work on preparing the detail for 2017/18 will be led by Planning, Finance and Procurement Division and will take place over the remainder of Quarter 3 and the early part of Quarter 4. The Board will discuss the 2-17/18 Annual Plan at its March meeting.

8. HSE’s leadership within the health and safety system has brought the Sector Plans together. Wider system ownership is essential so that they are supported and championed by others. The analysis and review of the evidence base involved not only work across HSE but also engagement externally. Where stakeholders’ views were already known, these were taken into account and HSE sector leads also took the opportunity to test the evidence base and early drafts with key external stakeholders, particularly through tripartite forums. The Sector Plans now need testing through a programme of targeted engagement and potentially through a series of bespoke regional roadshows.

9. In setting out HSE’s proposed actions for each sector we hope this will act as a prompt to invite the system and sectors to respond with their own initiatives. These will then feed into, and form part of the HGBWW Commitments campaign.

10. For the purposes of this paper, the 19 sector plans are brigaded alphabetically in a separate stand-alone document.

11. The Board is invited to discuss the draft sector plans.

**FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES**

12. The plans proposed can be delivered within current budget assumptions – they reflect some re-focusing work, the detail of which will be worked through as part of annual planning. They will also create commercial opportunities.

13. The detailed evidence base underpinning the Sector Plans has been used to inform the Health and Work Strategy, for our future plans for engagement with SMEs and to identify potential commercial opportunities. The project continues to dovetail with the wider HGBWW Commitments campaign.

**HANDLING AND COMMUNICATIONS**

14. Subject to Board agreement, the intention is to use these draft of the Sector Plans for wider engagement. This will be through a combination of online (via GOV.UK), the December launch event for the Health and Work Strategy, planned stakeholder events and the series of bespoke regional roadshows scheduled for Jan-March 2017 that Board members are already aware of. This engagement will
culminate in the National Conference planned for later in the year when the finalised Sector Plans will be published.

15. A series of questions will be posed as part of this engagement, the proposed overarching questions include:

- How do we ensure ownership of health and safety performance, and the work to improve standards in the industry, is driven through those in the sector?

- How do the summaries and priorities in each individual Sector Plan align with your perspectives, do they inform and enable a movement for change?

- What are the lessons from other sectors which could be adapted and and/or applied in order to provide improvements in different sectors?

16. The engagement period will also be used to continue working across HSE to develop and refine the most appropriate interventions to underpin the proposed HSE actions for each sector and cross cutting issues and to identify commercial opportunities.

17. The Board is invited to discuss the forthcoming engagement activities, including what account needs to be taken of the devolved and regional landscapes in tailoring the engagement to secure greater ownership of the sector plans and the Health and Work strategy by the system, in particular:

- How should the Partnership on Health and Safety Scotland (PHASS) be played into the event in Scotland?

- Should something similar to PHASS in Scotland (but specifically tailored to HGBWW) be set up in Wales as a mechanism to ensure joined-up working with Welsh Government (and Welsh stakeholders) on devolved matters such as agriculture, environment, health and education?

- Are there any aspects of English regions that need to be taken into account in spreading ownership by the system – e.g. the Greater Manchester Combined Authority?

- Are the roadshows an opportunity to consult upon such matters?

**CONTACTS**

Philip White, Head of Operational Strategy, EPD Tel: 020 3028 1387

Matt Penrose, Manufacturing, Transportation and Utilities Unit, EPD 0151 951 4909
Regulatory plans
The strategy ‘Helping Great Britain work well’ sets out how all who carry out or influence activities and attitudes towards health and safety in the workplace can contribute to the ambition of improving Great Britain’s health and safety record.

This document, ‘HSE’s Regulatory Plans’ sets out HSE’s part in making an impact on the health and safety performance in Great Britain and the strategic priorities we propose to tackle across different industry sectors.

At HSE, we can draw on a long and rich experience of innovative regulatory activity to focus on what is important. By using all of our relevant skills, focussed on the right things we make a significant impact on health and safety performance.

Some of our work is driven by what must be done - investigating incidents in line with our incident selection criteria; assessing safety cases and giving permission for the most hazardous activities to proceed; delivering our international obligations in assessing and approving the placing on the market of chemicals are but a few.

Where we have a choice in deploying resources, our actions are driven by where we have the greatest impact. Our approach segments Great Britain’s workplaces into sectors, 19 in total, scoped by recognised industry identities and common risk profiles. For each sector we have developed:

- A plan covering its health and safety performance,
- Identified the top three strategic priorities for the next 3-5 years; and
- The action we, as the national regulator propose to take to address these.

They include health priorities informed by the ‘Health and Work Strategy’.

The evidence and analysis underpinning each plan enables us to make relative judgements about the level of hazard and risk associated with each sector; highlighting areas where our attention is best placed or could prove most effective.

The interventions mix and communications techniques we will use to tackle the identified priorities will reflect each sector’s characteristics and the actions required to deliver improvements. This will drive the resources and skills needed to bring about the changes that we seek.

Not all sectors will require the same level of resource or focus, in some instances actions may be delivered by the deployment of a small amount of resource to achieve the change that we seek where as for other interventions this may not be the case.

The actions we propose to take are outlined under the headings:

- Lead and engage with others to improve workplace health and safety.

This includes engaging with those who undertake, or influence, health and safety in the workplace, collaborating with stakeholders and intermediaries, campaign activity and provision of guidance and support materials to raise awareness and leadership to achieve behaviour change.

- Provide an effective regulatory framework

This covers work to simplify and streamline legislation and improve guidance. This work continues within the government’s deregulatory agenda and as proposals for implementing the outcome of the EU referendum develops.

- Secure effective management and control of risk

Our primary focus is on workers, but our regulatory interest extends to cover the impact on the general public, consumers and the environment. A variety of interventions are used to assess and secure effective management and control from a wide range of common hazards

- reduce the likelihood of low-frequency, high impact catastrophic incidents
Higher hazard sectors will continue to require our attention. This includes sectors with permissioning, licensing and approval schemes that seek to control risk at or before the point of its creation.

Having distilled a complex picture and setting out the high level actions we will take over the next 3-5 years, two priority areas emerge for focussing our effort:

- **Health:** In order to make a real difference on work related ill health, we are focussing on work-related stress, musculoskeletal disorders and lung disease. The Sector Plans identify those sectors where these remain a problem and where we will be taking action.

- **SMEs:** There needs to be a step change in how SMEs in particular sectors manage and control risks. The Sector Plans identify those sectors where this is a particular problem and where we will be taking action.

The sectors where these priority topics are a significant challenge and will be our main focus for where we choose to deploy our resources include construction, agriculture, logistics and transport, public services, manufacturing and waste and recycling. The accompanying table highlights in which sectors the priority topics are a particular focus.

The actions in the Sector Plans are strategic and high level. The specific activities, work and timings to deliver the strategic actions will be brought together in our Annual Plan and Divisional work plans each year.

These Sector Plans are currently in draft. We are engaging stakeholders over the coming months on their content with a view to publishing the final versions in April/May 2017.

**Richard Judge**  
*Chief Executive*

**Martin Temple**  
*Chair*
Table showing those sectors where priority topics are a problem and where HSE proposes to take action

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<th>MSDs</th>
<th>Stress</th>
<th>SMEs</th>
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Sector plan for health and safety: Agriculture

This sector covers the traditional farming and forestry industries – crop and animal production, forestry and logging and fishing and aquaculture.

Around 340,000 people work in the sector, 1% of the GB workforce, with a mix of self-employed people, employees, family, and casual and gang labour for seasonal activities. It is an important sector economically, contributing around £11 billion to the economy (around 1% of the total).

Current position

Of all industries, agriculture has one of the poorest records for managing health and safety.

On average, agriculture kills 35 people each year including 4 members of the public. The fatal injury rate, at around 20 times the all-industry average, shows no signs of improvement over the longer term. Main causes of fatal injury include being struck by moving vehicles, falling from height and being injured by animals.

Around 4% of workers are injured in non-fatal accidents annually, a rate double that across all industries which equates to 15,000 workers each year. The main causes include slips, trips and falls, being injured by animals and lifting and handling.

Around 4% of workers suffer an illness they believe to be work-related, an average of 16,000 workers each year. The most common work-related health issue is musculoskeletal disorders (accounting for around half of all cases) while other conditions include occupational lung disease.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing the number of fatal injuries
- Tackling the main causes of ill health, in particular musculoskeletal disorders and occupational lung disease
- Ensuring that the industry takes ownership of their health and safety challenges and leads on developing and implementing solutions
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- working with partners to inform their activities and to drive forward improvements in safety performance and in tackling work-related ill health;
- using our research and working with other government departments to share data and intelligence to help target and blend appropriate interventions to amplify messages;
- providing partner organisations with data that will help guide their resources and activities to influence across the industry.

We will provide an effective regulatory framework by:

- encouraging compliance in the industry through:
  - ensuring that our investigation work and enforcement actions have an educational and deterrent effect across the industry;
  - reinforcing that self-employed farmers are not exempt from the law on health and safety, using appropriate level of interventions to underline this;
  - supporting farm and forestry safety partnerships in promoting compliance and good health and safety performance.

We will lead and engage with others to improve workplace health and safety by:

- encouraging full ownership of health and safety problems, and developing an industry-wide strategic approach to changing behaviours and attitudes through:
  - developing and publishing insight to identify audience segments, channels and trusted messengers to stimulate behaviour change;
  - developing and delivering an appropriate blend of intervention techniques to build from this industry insight to maximise the reach and impact of our activities.
Sector plan for health and safety: 
**Bioeconomy**

This sector covers a diverse range of activities exploiting biologically-based technologies to tackle global challenges facing humanity in food, chemicals, materials, energy production, health and environmental protection.

The UK aims to grow a £10 billion synthetic biology market and the Organisation for Economic Co-operation and Development (OECD) estimates the growth of the bioeconomy to achieve almost 3% of Gross Domestic Product by 2030.

Working on the most dangerous organisms affecting humans, animals and plants requires high levels of containment and security. The ability to create new disease-causing organisms – either deliberately or accidentally – requires strong risk management as well as national and international collaboration and leadership. The top three priorities for the sector are as follows:

- Preventing accidents with the potential for extensive harm to workers, members of the public and the environment
- Ensuring strong and competent leadership across the sector
- Ensuring risk management keeps pace with innovation and change

Current position

Overall, the sector has a good health and safety performance record, with a high level of control of the most hazardous organisms. However, the major-hazard dimension to some organisms and technologies means there is no room for complacency.

At the heart of a thriving bioeconomy is cutting-edge science and the development of new technologies – such as biodesign, genome editing and synthetic biology. Rapid innovation requires a flexible and proportionate regulatory framework and responsible leadership across the sector, extending to non-traditional users, such as engineers and biohackers.

Societal concern, particularly around genetically modified organisms and biosecurity, means incidents could have a negative impact on the future growth of the sector.

Priorities

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- Preventing accidents with the potential for extensive harm to workers, members of the public and the environment
- Ensuring strong and competent leadership across the sector
- Ensuring risk management keeps pace with innovation and change
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- providing a proportionate, prepared and timely response to the changing human and animal disease picture, through:
  - delivering a programme of assessment and interventions focused on the highest-hazard sites;
  - providing the government’s contribution to controlling the accidental release of hazardous organisms, as part of the UK biosecurity strategy refresh;
  - delivering interventions at facilities handling the polio virus to support the government’s response to the World Health Organisation’s polio eradication programme;
  - facilitating the safe application of suited systems to high-containment facilities.

We will lead and engage with others to improve workplace health and safety by:

- supporting the establishment of a new cross-sector strategic leadership group for Great Britain.

We will secure effective management and control of risk by:

- ensuring the regulatory framework adapts and remains agile to keep pace with innovation and change in the sector, through:
  - participating in the national Governance Subgroup of the Synthetic Biology Leadership Council;
  - designing and implementing interventions to provide a proportionate and targeted oversight of synthetic biology;
  - using insight to engage non-traditional users of biotechnology (eg DIYbio) to develop a safety framework for their community.
Sector plan for health and safety: Chemicals

This sector covers a diverse range of industrial activities including chemicals manufacture, product formulation and supply, refineries and storage of hazardous substances. The processes and quantities of hazardous substances present the potential for major accidents. There are also potential risks to human health and the environment in the industrial and domestic use of chemicals.

The sector employs directly in excess of 200,000 workers. Chemical and pharmaceutical manufacturing contributes around £23 billion to the economy.

Current position

The ongoing focus in manufacturing/storage is on the prevention of major accidents which, although relatively rare, can be catastrophic. Operators generally have a mature understanding of major hazard risk management and the regulatory framework, which includes environmental protection and the wider planning system.

Together, this has resulted in GB’s record on major accidents in this sector being one of the best in the world. However, control failures and incidents can and do happen so ongoing attention is required.

The other key area of activity is on protecting people and the environment from harm that could arise from the supply and use of chemicals in products common in society. This is achieved through the delivery of appropriate authorisation and registration, classification and labelling regimes.

There are no specific occupational health or safety issues warranting particular attention within this sector.

Priorities

Substantial improvements have been made in controlling major accident hazards following the explosion and fire at Buncefield in 2005 and the establishment of the Process Safety Leadership Group and the COMAH Strategic Forum (CSF).

The UK is a leading international choice for key evaluations of plant protection products, biocides and chemicals registration. The top three priorities for the sector are as follows:

- Preventing major accidents with the potential for harm to workers, the public and the environment
- Embedding process safety leadership and improved hazard mitigation principles
- Ensuring timely submission and processing of applications for authorisation of chemical products
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- delivering targeted interventions at major hazard sites, in line with HSE’s Major Hazards Regulatory Model;
- refining our planning and targeting to deliver an improved intervention programme;
- maintaining and developing our understanding of emerging issues such as cyber security.

We will lead and engage with others to improve workplace health and safety by:

- engaging with and influencing at a senior level to deliver improved leadership and informed decision-making for controlling and mitigating major accident hazards;
- working with industry and regulatory partners through the CSF and others to identify priority issues and develop solutions;
- developing, agreeing and rolling out new metrics for publicly reporting industry and regulator performance;
- addressing major hazard leadership in the wider sector, beyond the CSF represented businesses;
- providing advice and guidance for all businesses subject to pesticide, biocide, REACH and CLP regulations;
- chemical regulation.

We will provide an effective regulatory framework by:

- promoting HSE’s land-use planning tool and advice service for planning authorities and developers to inform earliest and best decision making;
- maintaining and improving the efficient and effective delivery of the COMAH regulatory regime and our provision of statutory advice to the planning system;
- providing robust scientific input to the EU regulatory process for all of the regimes we regulate;
- negotiating with and influencing others to ensure a proportionate and practical interpretation of EU chemicals regulations;
- taking appropriate action where the potential removal of a chemical product from the market may impact on the ability to protect humans and the environment in the UK.
Sector plan for health and safety: **Commercial consumer services**

This sector covers the beauty, retail, hospitality, catering and cleaning industries. It employs 6 million workers, representing around 20% of the GB workforce, mainly employed in SMEs.

A common factor across the sector is the interface with members of the public who could be affected by the work activities. Local authorities have responsibility for enforcing health and safety law in this sector.

### Current position

Compared to all other industries, the average rates of work-related injury and ill health are lower overall.

The sector can be broadly categorised as comparatively low-risk. It has not been identified by HSE as suitable for proactive inspection by local authorities under the terms of the National Local Authority Enforcement Code.

The main causes of injury include slips, trips and falls, lifting and handling, working at height, and being struck by an object.

Health issues include musculoskeletal disorders, occupational lung disease, dermatitis from exposure to hazardous chemicals, and work-related stress.

### Priorities

The sector will need to continue to focus on the following three priorities:

- Reducing the number of injuries, with a particular focus on controlling slips, trips and falls
- Tackling the main causes of ill health, particularly musculoskeletal disorders and occupational lung disease
- Protecting members of the public
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- monitoring industry developments and performance and providing guidance, advice and support to stakeholders;
- supporting a cohesive and joined-up approach through the Primary Authority Scheme.

We will provide an effective regulatory framework by:

- providing direction and guidance to support local authorities’ regulatory activities in the sector;
- promoting a sensible and proportionate approach in applying the Health and Safety at Work Act to protecting members of the public.

We will lead and engage with others to improve workplace health and safety by:

- maintaining and strengthening relationships with key stakeholders in the sector.
Sector plan for health and safety: Construction

The construction sector ranges from large, high-profile projects by major contractors to small projects by the self-employed. Around 2.2 million people work in the sector, representing around 7% of the GB workforce. It contributes around £97 billion to the economy, equivalent to around 6% of the total. It is dominated by smaller firms with around 84% having no employees and another 14% having nine or fewer workers.

Current position

Construction remains one of the most hazardous industries, accounting for about a quarter of all GB fatal injuries to workers. In the five years to March 2016, 210 construction workers have died and many more have received life-changing injuries at work. Performance has improved over the past decade, and the number and rate of fatal incidents, workplace injury and work-related ill health show a general, long-term downward trend. However, the levels of incidents and ill health remain high, with some recent signs of the numbers of cases levelling off.

Developments in the management of health risks have not been keeping pace with safety improvements.

In 2015/16, 3.7% of the workforce were suffering from an illness they believe was caused, or made worse, by their work. The sector has a statistically significantly higher rate of occupational lung disease and musculoskeletal disorders than the average for all industries.

Risks on larger projects can be substantial but, generally, large projects are better at controlling risks than many small projects where there can be a lack of awareness of even basic health and safety obligations. The majority of fatal accidents involve small businesses, and nearly half of all reported injuries occur in refurbishment activities.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing incidents of ill health, with a particular focus on occupational lung disease and musculoskeletal disorders
- Supporting small businesses to achieve improved risk management and control
- Embedding the principles of the Construction (Design and Management) Regulations 2015 (CDM)
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- directing inspection and enforcement at those failing to manage and control risks, focusing on health risks, refurbishment, and licenced asbestos removal;
- visiting dutyholders to review their health risk management arrangements using leading indicators in the Construction Health Risks Toolkit;
- intervening with construction clients, principal designers and designers to ensure proportionate CDM understanding and compliance, working with or through other health and safety regulators (e.g., ONR) where necessary.

We will lead and engage with others to improve workplace health and safety by:

- working with the Health in Construction Leadership Group in promoting the ownership by industry of good health risk management, and the development of case studies and health-specific leading indicators;
- funding communication insight research enabling improved risk awareness, management and mitigation in small and micro businesses;
- helping small businesses to comply proportionately with CDM, e.g., case studies on social media;
- working with professional bodies to enhance the competence of designers through the effective teaching of design risk mitigation across built environment higher education courses;
- demonstrating the effective use of building information modelling (BIM) to improve risk information sharing, coordination and collaboration throughout the construction process;
- working with supply chains to reduce risks from manual handling.

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- early and strategic interventions with major projects, including Crossrail, HS2, Thames Tideway, power generation decommissioning and new build;
- working with industry to develop clear standards of construction risk leadership and leading performance indicators.
Sector plan for health and safety: Explosives

This is a relatively small but strategically important sector for the UK. It provides military products to national and allied forces and products critical to a range of other sectors including onshore and offshore extractive industries and entertainment and leisure.

The sector ranges from multinational organisations to micro businesses, with the majority being SMEs. Regulatory responsibility is shared across HSE, MoD, local authorities, fire & rescue services and the police.

Current position

• There are generally low numbers of incidents, but injury rates are difficult to determine due to year-on-year variation. There are no particular occupational health issues specific to the sector. Due to the global nature of explosives manufacture and storage, indicators of performance from other countries inform our evidence base.

• All areas of the sector are witnessing increased demand for products and services, whether for defence needs at home and abroad, smart detonators for the extractive industries or novel, high-impact special effects. There has been significant recent investment by key players in the sector to combat the combined effect of an ageing workforce and a decline in core skills.

• There is an extensive range of key stakeholders and, historically, engagement has had a technical focus rather than driving strategic direction. There remains more to do for the sector to adapt its current approach and encourage more ownership and involvement. HSE has a substantial international reputation within the explosives sector, influencing agreements through the UN and European Advisory Committees and Working Groups.

Priorities

While the number of incidents in the sector is relatively low, the consequences of a single incident can be catastrophic. Engagement with key stakeholders in the sector and analysis of available evidence has identified three priorities for future work (see below). There are also other areas being addressed which are captured in other plans.

• Addressing the need for effective leadership across the sector
• Supporting work to address the decline in core skills and an ageing workforce
• Contributing to cross-industry and cross-government work on security of explosives, security of supply, physical security and cyber security
What HSE will do to #HelpGBworkwell

We will lead and engage with others to improve workplace health and safety by:

- using our knowledge and experience to support an intelligence-led, policy-making and regulatory approach;
- acting as the established centre for non-Ministry of Defence explosives knowledge, providing support to national and international policy makers and regulators, and engaging in collective research and knowledge sharing.

We will secure effective management and control of risk by:

- working with business and across government on key major-hazard issues of competence and security;
- continuing as a prime mover in the cross-government assessment of capability gaps, to ensure future needs are understood and addressed;
- delivering an effective and efficient permissioning regime, making business process improvements to align with the government’s wider ‘digital by default’ agenda.

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- delivering and supporting risk-based regulatory interventions, focusing on relevant key risks;
- delivering the UK Competent Authority role in relation to the regulation of the safe transport of explosives and the safety of articles placed on the market;
- developing our understanding of the future explosives sector landscape, in particular nanotechnology and cyber security.
Sector plan for health and safety: Fairgrounds and theme parks

This sector covers fairgrounds and theme parks which are popular family attractions.

Public safety is the principal concern in this sector with a key health and safety focus on controlling the risks presented by the rider/machine interface, particularly those risks arising from potential failure or incorrect operation of large, higher-risk rides.

Current position

The sector’s health and safety performance, in relation to public safety, is comparatively good given the number of visitors to fairgrounds and theme parks, and the number of rides taken annually.

However, recent incidents highlight the risk of failure or incorrect operation of large rides which can result in multiple serious injuries and potentially fatalities.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing the risk of low-frequency, high-consequence events on fairground rides
- Improving health and safety standards across the sector
- Improving the quality of inspections carried out under the industry-operated Amusement Devices Inspection Procedures Scheme (ADIPS)
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- proactively inspecting higher-risk fairground and theme park rides and activities;
- seeking to improve standards of maintenance and inspection of rides in pockets of the travelling fair sector and challenging inadequate standards of pre-use and in-service annual inspection;
- ensuring action is taken by ride controllers to address technical or operational failings at fairground rides and theme parks involved in previous incidents.

We will provide an effective regulatory framework by:

- working with the Amusement Devices Safety Council (ADSC) to secure continuous improvement of the Amusement Devices Inspection Procedures Scheme (ADIPS) scheme including:
  - improvements in governance regarding the selection, retention, competence and diligence of ride inspectors;
  - encouraging greater ownership and involvement from individual trade associations in raising health and safety standards;
- ensuring HSE retains a well-trained and resourced National Fairgrounds Inspection Team (NFIT) with access to guidance and current knowledge.

We will lead and engage with others to improve workplace health and safety by:

- supporting strategic industry initiatives that show leadership in tackling key problems.
Sector plan for health and safety: Film, broadcasting, theatre and events

The sector covers all businesses and activities in the entertainment and creative arts fields including: small to large-scale film production, television and radio broadcasting, the performing arts, cultural and sporting events, exhibitions, festivals and conferences and corporate hospitality.

This sector is worth billions of pounds to the GB economy and has a high public, political and media profile.

Current position

Many production activities are well managed. However, due to the innovative and creative, fast moving and variety of the work, the potential exists for serious and fatal accidents.

The main safety risks arise from work at height, structural collapse and workplace transport. Other risks include slips and trips, electricity at outdoor events and manual handling. The nature of the work often involves long hours and night shift work leading to fatigue and reduced concentration, potentially increasing the likelihood of an accident.

The principal health risks are associated with musculoskeletal disorders, work-related stress and exposure to high noise levels.

Potential also exists for catastrophic incidents affecting the public at mass gatherings, eg being trampled on in a crowd and/or the collapse of a structure.

‘Business-on-business’ burden can be created by over-interpretation of the law and by the requirements of overlapping public safety legislation.

Priorities

Working with stakeholders we will continue to focus on the following three priorities:

- Poor working practices and health risks during production/event construction activities
- Ensuring public safety at mass gatherings
- Encouraging an effective, consistent and proportionate approach to health and safety risk management and regulation
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

• addressing specific areas of high risk in the sector – with a focus on the construction and dismantling of temporary structures;
• providing direction, support and guidance to support local authorities’ regulatory activities in the sector.

We will lead and engage with others to improve workplace health and safety by:

• working with national stakeholders in the Joint Advisory Committee on Entertainment (JACE) and other industry bodies to encourage them to improve workplace safety culture and performance.

We will provide an effective regulatory framework by:

• providing advice and guidance on consistent and proportionate compliance and enforcement;
• simplifying risk management practice, where required, and helping businesses to grow.
Sector plan for health and safety:

Gas and pipelines

This sector covers onshore pipelines, gas and fuel storage facilities and gas - including liquefied natural gas (LNG) - importation terminals. It also covers the sub-sea pipelines used to import and export gas to and from Europe and Norway and is crucial to meeting Great Britain’s energy needs.

Pipeline supply failures have the potential to leave industry without energy and essential products and the public without heating. The sector is characterised by significant quantities of hazardous substances with the potential for major hazard incidents affecting workers, the public and the environment.

Current position

There is a high level of control of the major accident hazards and there are no specific occupational health or safety issues warranting particular attention.

The majority of dutyholders are national and multinational companies with highly trained managers and staff. The sector has strong leadership through a number of trade associations with a good range of technical support organisations. Contracting out pipeline management requires adequate corporate oversight to ensure continuing competence and investment.

The sector has made good progress on tackling the risks associated with ageing infrastructure; such as reducing the numbers of ageing gasholders. The iron mains risk management programme has seen the replacement of iron gas pipes with safer alternatives manufactured from polyethylene.

Ongoing vigilance is needed to prevent third-party damage to pipelines, including illegal tapping which is linked to organised crime.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Preventing major accidents associated with the loss of containment of gas or volatile fluids
- Managing the risks associated with ageing infrastructure/failure of asset integrity
- Ensuring that emerging energy technologies and fuels can be incorporated safely
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

• ensuring long-term asset integrity in the onshore gas networks by continuing to oversee the gas cast iron mains replacement programme;
• ensuring safety standards are maintained at LNG importation and storage sites as throughput increases;
• delivering a programme of interventions focused on highest risks in the sector, with a focus on safety critical competence and leadership.

We will provide an effective regulatory framework by:

• ensuring that the regulatory framework supports the safe use of renewable and unconventional gases, such as hydrogen, biomethane and shale gas, in the gas distribution networks;
• continuing to assess the opening up of the gas market by supporting trials of out of specification natural gas.

We will lead and engage with others to improve workplace health and safety by:

• working with the Department of Business, Energy and Industrial Strategy, gas industry stakeholders and trade unions to improve the management of any large-scale gas supply emergency.
Sector plan for health and safety: Logistics and transport

This sector includes distribution centres, road-haulage, postal and courier services, ports, airports and hubs.

There are around 900,000 people in logistics alone, but a rise in those involved in road haulage and ‘final-mile’ delivery masks a reduction in the numbers working in ports and traditional postal employment.

The sector contributes around £65 billion to the economy, around 4% of the total, with the prospect of further sustained growth.

Current position

The logistics sector has a worse than average record for health and safety performance. According to recent Labour Force Surveys, the non-fatal injuries rate is almost double the all-industries rate. Similarly, for ill health, the rate of musculoskeletal disorders is 50% higher. For both, the rates are particularly high in the postal and courier sub-sector, but nearly all of the sub-sectors have higher-than-average rates, especially for injuries.

Other areas of importance for health can be grouped around the effect of travelling, including welfare arrangements and fatigue.

Load safety continues to be a cause for concern. Poor packing, securing, and marking can cause significant risks during transit and then again at the delivery site.

Work-related road risk is an ongoing focus with a March 2015 Transport Safety Commission report suggesting 30% of deaths and serious injuries on the roads occur in the course of work.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing the impact of poorly controlled loads
- Reducing the rate of ill health caused by musculoskeletal disorders
- Increasing engagement with work-related road risk
We will secure effective management and control of risk by:

- targeting interventions focused on the highest-risk sites and activities, with a particular focus on load safety and musculoskeletal disorders;
- adapting flexibly and proportionately to technological developments so that health and safety can be assured and the wider benefits realised.

We will provide an effective regulatory framework by:

- undertaking a review of why rates of musculoskeletal disorders remain stubbornly high in parts of the sector in order to identify any new problems and solutions, promote under-utilised solutions, and further HSE interventions where needed;
- developing and communicating HSE's regulatory position on work-related road risk, incorporating insight, research, and industry and cross-regulator intelligence.

We will lead and engage with others to improve workplace health and safety by:

- supporting strategic industry initiatives that show leadership in tackling key problems;
- supporting initiatives that are focused on better understanding the impacts of poor welfare facilities on health and which aim to bring about a step change in awareness of responsibilities to all those involved in the provision of welfare facilities.
Sector plan for health and safety: Manufacturing

This sector covers a diverse range of activities, from small-scale motor vehicle repair, woodworking and metal fabrication, paper and plastic manufacture, food and drink production to car manufacture and shipbuilding. Around 3 million people work in the sector, representing around 9% of the GB workforce. It contributes around £140 billion to the economy, around 10% of the total.

Current position

The sector has a mixed record for health and safety performance. There are some key strategic partners such as EEF (the manufacturers’ organisation) alongside effective trade associations who provide good support and advice. But more improvements need to be made.

On average, 27 workers are killed each year in this sector, accounting for almost 20% of all workplace fatalities. The rate of fatal injury is higher than the all-industry average, with main causes including being struck by objects, fall from height and contact with machinery.

Around 3% (78,000) of workers are injured in non-fatal workplace accidents annually, higher than the all-industry rate, with main causes including lifting and handling and slips, trips and falls.

Annually, around 3% (86,000) workers suffer an illness they believe to be work-related, a similar level to workplace injury. Known health issues across the sector include musculoskeletal disorders, work-related stress and occupational lung disease.

Priorities

The development of new and advanced manufacturing methods, such as collaborative robots, 3D printing, and new materials etc, will be both a challenge and an opportunity for the sector. We have engaged with key stakeholders and concluded that the top three priorities are as follows:

- Controlling exposures to substances causing occupational lung disease
- Reducing the incidence of common work-related ill-health conditions, such as MSDs and work-related stress
- Preventing serious incidents involving heavy loads, during maintenance activities and catastrophic events
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- delivering a programme of interventions focused on the priority risks, with a particular focus on occupational health;
- promoting HSE’s Health and Work strategy and adopting effective controls.

We will reduce the likelihood of low-frequency, high-impact catastrophic events by:

- using insight, research and industry intelligence to develop a clear understanding of catastrophic events in the sector and clearly communicating the findings and control methodologies required.

We will lead and engage with others to improve workplace health and safety by:

- working with all trade associations, trade unions and partnership groups to ensure effective leadership and competence on the key hazards and risks across the sector and encouraging all groups to work together;
- working with specific industry subsectors to ensure that plans are developed to implement the priorities of this overall Manufacturing Plan;
- developing board-level strategic engagement with key dutyholders.
This sector covers underground coal mines, mines producing other minerals, tourist mines, mines used for adventure or educational activities and storage mines. Dutyholders range from large employers to SMEs.

Coal production has reduced over recent years, but the sector still provides a contribution to the economy, producing rock salt for road treatment in winter, potash for fertiliser production and gypsum for cement and plaster production and other specialist minerals. Tourist and adventure activities at mines have the potential for a substantial public hazard and are increasing slowly, as are the numbers of mines used for storage and controlled waste disposal.

The sector comprises around 100 mines located around Great Britain. Work is in progress to sink a new coal mine in West Yorkshire and there is also a well-developed proposal to sink a very large polyhalite mine in North Yorkshire to produce up to 12 million tonnes per year.

Current position

Mining technologies and techniques are generally well established and unlikely to change significantly in the future. The health and safety hazards and control measures are well known, although reduced exposure limits for various gases commonly found underground are being introduced.

Working conditions in the sector have improved greatly over the years, but workers can still be exposed to a range of work-related hazards such as fire, explosion, rock falls and hazardous dusts and gases.

The potential for catastrophic incidents remains high. An inrush of water at the Gleision Mine in 2011 killed four workers, a spontaneous combustion on a coal face at the Daw Mill Mine in 2013 resulted in its closure, with the loss of over 500 jobs, and a major underground fire occurred at a working mine in 2016.

Priorities

Extensive engagement with key stakeholders in the sector and analysis of available evidence has identified the main future priorities. There are many other issues being addressed across the sector which are captured in other plans, but the top three priorities for the sector are as follows:

- Preventing major accidents with the potential to harm multiple workers
- Addressing the decline in core skills and an ageing workforce
- Tackling the main causes of ill health, in particular occupational lung disease
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- delivering a programme of interventions focused on highest risks;
- engaging at an early stage in the design, construction and development of new mining projects in the UK.

We will lead and engage with others to improve workplace health and safety by:

- challenging and supporting leaders and others to address core problems – particularly the decline in core skills and an ageing workforce;
- supporting the sector in achieving compliance with a range of new indicative occupational exposure limit values (IOELVs) affecting underground mining activities.

We will secure effective management and control of risk by:

- supporting competence management and improving control of contractors;
- designing a range of targeted interventions focused on work-related health issues, with a particular focus on occupational lung disease (caused by exposure to diesel fume and particulates, dusts, radon and respirable crystalline silica) and noise and vibration;
- ensuring risks to members of the public are being properly controlled at tourist and leisure sites.
Sector plan for health and safety: Offshore energy

This sector covers oil and gas production, storage and conveyance, and electricity generation from renewable technologies (wind, wave and tidal) in UK waters. Around 32,000 people work in the sector, and it is strategically important to the UK economy, with oil and gas alone providing around 70% of its energy needs.

Current position

While offshore workers are exposed to a wide range of personal health and safety risks, the main priority is preventing major incidents that could result in multiple fatalities or injuries, or loss of infrastructure critical to the UK economy. Many installations are working beyond their design life, and the recent fall in oil prices has put significant economic strain on operators working in the North Sea.

Overall, the industry has demonstrated a good standard of management of personal safety issues, but the picture for controlling health risks is less positive where the industry has placed less emphasis on addressing work-related ill health.

Since 1967, 43 billion barrels of oil equivalent have been recovered by the UK. Although the North Sea is a mature basin, it is estimated the sector still has access to around a further 20 billion barrels of oil equivalent from both existing fields and new developments.

The UK is the world leader in offshore wind. The world’s largest single offshore wind farm operates in UK waters and this part of the sector is expanding rapidly, with construction at its highest rate of activity. The production capacity of the industry is expected to double by 2020.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Preventing major accidents associated with the loss of containment of oil and gas
- Managing the risks associated with ageing infrastructure and the failure of asset integrity, and offshore decommissioning activities
- Improving leadership, competence and workforce involvement
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- ensuring the safe decommissioning and dismantling of offshore assets;
- holding the offshore industry to account to ensure safe operations of installations which are working beyond their design life;
- delivering a programme of interventions focused on the highest-risk activities;
- developing an industry-wide risk reduction programme for offshore renewables.

We will provide an effective regulatory framework by:

- participating with industry, stakeholders and other regulators to ensure the risks associated with developing technologies and operating methods are understood and adequately controlled (e.g., decommissioning and exploration in harsher, deeper waters);
- collaborating with other regulators across regulatory boundaries.

We will lead and engage with others to improve workplace health and safety by:

- improving the competence of workers, supervisors and support personnel in the offshore energy sector;
- supporting greater workforce engagement in the delivery of offshore health and safety solutions;
- improving the planning and management of operators involved in offshore projects—particularly focusing on managing change;
- engaging with senior leadership through an expanded programme of interventions.
Health and Safety
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Current position

While the exploitation of unconventional oil and gas reserves is in its infancy, the wider onshore sector has demonstrated a high level of control of major accident hazards. There are no specific occupational health or safety issues warranting particular attention within this sector.

The expansion of the unconventional oil and gas subsector will see a number of new companies enter and strong leadership by the industry will be needed to maintain public and political confidence in the sector.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Preventing major accidents associated with the loss of containment of flammable and toxic gases
- Applying strong leadership so new entrants work safely
- Ensuring public and political confidence that the regulatory regime is robust and effective

This is a small but strategically important sector, covering onshore sites producing oil and gas from wells drilled into the ground. There are currently around 120 UK sites, producing around 1% of the UK's oil consumption. The largest operating onshore field in Europe is located in England.

The sector also covers the exploitation of unconventional oil and gas reserves, such as shale gas which is expected to grow over the next decade, particularly in England; in Scotland and Wales shale gas development looks likely to be on hold for some time.

This is a sector with a high level of public and political interest.

Sector plan for health and safety:
Onshore oil and gas wells
What HSE will do to #HelpGBworkwell

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

• ensuring the operator is managing the risks to well integrity throughout the lifecycle of the well;
• delivering a programme of interventions focused on the inherent hazards, areas of highest risks and health and safety performance.

We will lead and engage with others to improve workplace health and safety by:

• establishing an effective onshore oil and gas leadership group;
• improving stakeholder understanding of the health and safety regulatory regime by delivering a public engagement event near all areas where shale gas development is likely.

We will provide an effective regulatory framework by:

• influencing the industry to be more transparent about their health and safety performance;
• ensuring that the health and safety challenges associated with the rapid expansion of the sector and the new workers to the sector are properly understood.
Sector plan for health and safety: Public services

This sector covers a range of services, including health and social care, education, local and central government, the emergency services and the military. Over 9 million people work in the sector, representing around 30% of the GB workforce. It contributes around £300 billion to the economy, around 18% of the total.

A common factor across the sector is the interface with members of the public who could be affected by work activities.

Current position

Because of the breadth of the sector, and the different health and safety issues that apply in different sub-sectors, quoting overall rates for the sector has limited value. Nevertheless, broad statements can be made in terms of statistical significance.

Around 400 000 workers suffer an illness they believe to be work-related each year, with the largest proportions due to work-related stress and musculoskeletal disorders (MSDs). This is statistically significantly higher than the all-industry rate.

On average, five workers are killed each year in this sector, a markedly lower rate than the all-industry rate.

Annually, around 170 000 work-related, non-fatal injuries occur in this sector. This is not statistically significantly different from the all-industry rate. Main causes include slips, trips and falls and physical assault.

This sector has the ability to influence public safety, but can sometimes take disproportionate precautions which can undermine sensible risk approaches.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing the high levels of ill health from work-related stress and MSDs
- Tackling specific safety issues in high-hazard activities, such as realistic training in the military
- Maintaining established standards as service provision becomes fragmented and new forms of delivery emerge
What HSE will do to #HelpGBworkwell

We will lead and engage with others to improve workplace health and safety by:

- investing our resources to embed sustainable health improvements deeply in public services, including:
  - undertaking evaluated pilot exercises to customise the stress Management Standards approach in healthcare, education, prisons and other parts of the public sector, and driving greater adoption and ownership in these various services;
  - undertaking a comprehensive review of why MSDs continue to persist in healthcare, leading to actions which will identify any new problems and solutions, promote underused solutions, and further HSE interventions where needed.

We will secure effective management and control of risk by:

- addressing specific areas of high risk in public services, including:
  - delivering a programme of strategic and tactical engagement to support and help further develop the Ministry of Defence’s internal regulatory capacity;
  - undertaking management inspections of the prison service’s policies and arrangements for managing violence and aggression.

We will provide an effective regulatory framework by:

- continuing to promote sensible and proportionate approaches to applying health and safety legislation to the public, to properly balance the Health and Safety at Work Act’s protective and enabling aspects;
- updating HSE’s position on the increasingly wide spectrum of ‘volunteering’ activities.
Sector plan for health and safety: **Quarries**

This sector includes surface mining of coal and industrial minerals. Around 21,000 people work in the sector.

Five major organisations employ about half the workforce, with the remainder working for SMEs.

### Current position

This is a high-hazard industry with work often carried out in poor environmental conditions. The industry signed up to a Quarries National Joint Advisory Committee (QNJAC) five-year target to reduce accidents by half in 2000.

This was followed by a further 50% reduction target from 2005 to 2010. This was exceeded and industry delivered an 85% reduction over the 10 years to 2010.

Health and safety competence ranges from good (mostly the multinational companies) to very poor (mainly SMEs who are not members of a trade body).

Since 2010, accident and ill-health rates have fluctuated and there are some consistently poor performers who lag behind in terms of risk reduction. The risks are common to all in the sector, they are not new and the precautions for tackling are well known so a fresh approach needs to be taken.

### Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing cases of occupational lung disease by better control of exposure to respirable crystalline silica
- Preventing high-hazard, low-probability events which could harm workers and the public
- Maintaining and applying the right levels of competence and leadership

This sector is the largest civil user and manufacturer of explosives in Great Britain. This creates on-site and off-site risks to employees, contractors and members of the public.
We will secure effective management and control of risk by:

- directing our inspection activities and frontline enforcement actions at those that are not controlling risks, with a particular focus on health risks posed by exposures to respirable crystalline silica.

We will reduce the likelihood of low-frequency, high-impact catastrophic incidents by:

- delivering a programme of interventions focussed on;
  - the manufacture and use of explosives;
  - the stability of tips and excavations.

We will lead and engage with others to improve workplace health and safety by:

- supporting strategic industry initiatives that show leadership in tackling key problems;
- challenging industry and other key players to do more to reach out and support poor performers in the sector, in particular SMEs.
Sector plan for health and safety: Sports and leisure

This sector covers a diverse range of activities from children’s play, swimming and countryside visits to thrill-seeking activities such as bungee jumping and motorised leisure pursuits. It also includes licenced adventure activities and is culturally and economically significant. Around 400,000 workers are employed across this sector.

Current position

Public safety, particularly the safety of children and young people, is the principal concern in this sector. While the overall risk profile is comparatively low, many activities involve an element of inherent residual risk. Some activities, even if properly managed, involve a risk of serious and fatal injury.

Despite the overall low risk profile, avoidable incidents do happen within the sector, although meaningful information on individual activities is difficult to obtain. Across the arts and recreation sector as a whole there are around 16,000 injuries and 24,000 ill-health cases per year, with similar rates to the all-industry averages.

The application of sensible and proportionate risk management is vitally important in this sector as imposing disproportionate risk control measures can result in restricting opportunities for individuals to engage in beneficial activities.

The challenge therefore is to find a balance between protecting the public from real risk without unduly restricting participation in beneficial leisure and recreational activities.

Priorities

Working with stakeholders we will continue to focus on the following three priorities:

- Preventing avoidable incidents to participants including children and young people
- Ensuring the application of sensible risk management
- Promoting effective, sensible and proportionate risk management and regulation for new and novel activities
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- addressing specific areas of high risk in the sector;
- supporting local authorities in their regulatory activities to promote a consistent and proportionate approach.

We will provide an effective regulatory framework by:

- reviewing the workings of the Adventure Activities Licensing regime and the role of HSE with the objective of ensuring that it is fit for purpose.

We will lead and engage with others to improve workplace health and safety by:

- supporting strategic industry initiatives that show leadership in tackling key problems and the application of sensible risk management.
Sector plan for health and safety: Utilities

This sector covers electricity, low-pressure domestic and commercial gas, water, sewerage and telecommunications industries. Excluding gas, this sector contributes around £57 billion to the economy, equivalent to 3% of the total.

Up to half a million people work in the sector, with a relatively high proportion in skilled and technical roles. All of the different industries covered are subject to high levels of political and regulatory scrutiny.

Current position

Generally these industries are characterised by having relatively mature, stable health and safety systems, with influential and well-informed intermediaries and trade associations well placed to develop and deliver improvements. However, there are pockets where the health and safety system is in a developing state and threats are increasing due to industry fragmentation and use of contractors.

The rates of work-related injury and ill health found in industries within this sector are similar to the average for all industries.

A particular focus of the gas subsector is on protecting gas consumers from fires, explosion and carbon monoxide poisoning. Fatal and serious injury rates have fallen significantly over the last 15 years, with a five-year rolling average of seven members of the public killed each year associated with gas appliances and installations.

Priorities

Key challenges for the sector are an ageing workforce, and maintaining and upgrading essential assets and infrastructure to meet future political and public needs. We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Ensuring new large infrastructure projects, and ageing plant and assets, do not lead to an increase in injuries or ill health
- Reducing the numbers of gas consumers harmed by unsafe gas work
- Ensuring that worker competence is maintained and managed for the future
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- holding the industry to account to deliver a safe smart meter programme;
- working with the Gas Safe Register to reduce the number of members of the public killed and injured by unsafe gas work.

We will lead and engage with others to improve workplace health and safety by:

- securing the best deal for consumer safety from the current and future Gas Safe Register;
- supporting and promoting strategic industry initiatives that show leadership in tackling key problems.

We will provide an effective regulatory framework by:

- ensuring that health and safety requirements are not used as an excuse to prevent the successful delivery of major programmes of work.
Sector plan for health and safety: Waste and recycling

This sector undertakes a diverse range of activities associated with the collection, handling, transfer, sorting and processing of waste. It employs around 120,000 workers, from large international businesses to small local ones, representing less than 1% of the GB workforce. It contributes around £7 billion to the economy (less than 1% of the total).

Current position

This sector has one of the highest rates of workplace injury and work-related ill health of all the main industry sectors. The Waste Industry Safety and Health (WISH) forum and the Scottish Waste Industry, Training, Competency, Health and Safety (SWITCH) forum are committed to improving this record. However, there are a number of dutyholders who deliberately flout health and safety laws.

Statistics show:

- the fatal injury rate is around 10 times the average across all industries. Main causes of fatal injury include being struck by moving vehicles, contact with moving machinery and being trapped by something collapsing or overturning. In the five years to 2015/16 there were 12 fatalities to members of the public as a result of work activity in the sector;
- around 5% of workers are injured in non-fatal accidents annually, around double the all industry rate. Main causes include lifting and handling and slips, trips and falls;
- around 5% of workers suffer a work-related illness, higher than the all industry rate. Most common health issues suffered include musculoskeletal disorders (MSDs) and work-related stress (accounting for around three-quarters of all cases), while other conditions include occupational lung disease and skin disease.

Priorities

We have engaged with key stakeholders and concluded that the top three priorities for the sector are as follows:

- Reducing the number of people killed by moving vehicles/caught in moving machinery
- Tackling the main causes of ill health - MSDs, work-related stress and occupational lung disease
- Ensuring the industry takes ownership and leads on implementing solutions
What HSE will do to #HelpGBworkwell

We will secure effective management and control of risk by:

- focusing our enforcement actions on those businesses that are not controlling risks, with a particular focus on risks posed by moving vehicles, contact with machinery and musculoskeletal disorders;
- developing an appropriate blend of interventions (including targeted inspections) to highlight safety risks and control measures;
- sharing information and intelligence with other regulators.

We will ensure an effective regulatory framework by:

- undertaking a review of the key health challenges faced by the sector, leading to actions which will identify any new problems and solutions, promote underused solutions, and further HSE interventions where needed.

We will lead and engage with others to improve workplace health and safety by:

- supporting and promoting strategic industry initiatives that show leadership in tackling key problems;
- challenging existing stakeholder groups to ensure individual members dedicate sufficient resources to their activities to ensure they function effectively.
The HSE Board is invited to:

- Note the work to develop HSE’s approach to occupational health issues, and
- Note the further external consultation planned for the proposed Health and Work Strategy.

KEY INFORMATION

1 HSE’s recently published statistics confirm a continuing high level of workplace ill health, with an estimated 1.3 million workers self-reporting a work-related illness. Stakeholders across the health and safety system have identified ‘health’ as an area of concern, and health is one of the key priorities within HGBWW. More broadly, the DWP/DH Green paper ‘Improving Lives’ published in November aims to improve individuals’ health outcomes through work, and to reduce demands on care and support systems. ‘Healthier working lives’ initiatives are also underway in Scotland and Wales.

2 Our proposed Health and Work Strategy (annex 1) outlines the importance we attach to collaborative working relationships with Government and other bodies, and the priorities we have chosen for HSE to make a real difference on occupational health – work-related stress/mental health, MSDs and occupational lung disease. The relevant ill-health statistics are contained in annex 2, and annex 3 provides a sample plan to show how our activities will be presented.

3 In October 2016, the Board and EMB discussed the challenge of improving workplace health and agreed:

- Health is complex and requires interventions along a spectrum from prevention through to rehabilitation - inevitably including health issues that span core ‘health and safety’ concerns through to more ‘wellbeing’ and social support issues;

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1 http://www.hse.gov.uk/statistics/index.htm
Effective impact across the spectrum requires collaboration and joined up approaches involving many stakeholders within and without Government, and
Within this spectrum it is clear that stakeholders other than HSE (e.g. Public Health England) are much better placed to lead on different issues.

The main conclusions from the Board workshop were:

- Agreement on the importance of an increased focus on health, whilst not diminishing our actions to control safety related risks:
- The importance of a cross-HSE programme - to prioritise, focus and brigade our activity - to make greater impact with existing resource levels. These business planning arrangements have now been established by the Engagement and Policy Division, and
- Acceptance that in a complex (and crowded) health landscape we need to set our own priorities, and to be very clear about the terms on which we collaborate with others. There are areas where:
  - we should take the lead (and enforce), eg preventing exposure to silica;
  - we could support others by facilitating industry partnerships and supporting organisations with initiatives, eg the imminent stress pilots, and
  - we wish to influence others, eg to construct a consistent, multi-agency narrative to avoid conflicting or confusing messages for dutyholders.

Our priorities are supported by the Science Division’s evidence review presented at the recent Board meeting in Buxton, but are ultimately judgement calls based prevalence, tractability and ensuring a critical mass of activity on a manageable number of issues. Stress and MSDs account for over 80% of all working time lost due to illness and occupational lung diseases account for 90% of current deaths related to past exposures at work. However, the selection of these priorities does not mean that we will cease all work on other health issues (such as our recent successful NHS sharps initiative). We will be more limited on other issues, however, and they are not likely to attract major campaign spending, for instance.

Consultation with key external interests on both sides of industry, HSE specialists and those engaging with a broader range of industry sectors has confirmed support for the focused activity being proposed. External engagement in the coming weeks will allow the specific plans to be further developed through a series of bespoke roadshows.

FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES

The plans proposed can be delivered with existing budgets – they reflect a re-focus internally and greater gearing externally. They will also create commercial opportunities.

There is a reputational risk if HSE fails to show ambition in rising to the challenge of supporting Government, industry, Trades Unions and individuals on occupational health issues, especially given the widespread calls for
progress on something directly within our remit. HSE has been successful in the occupational health arena in recent years (the award winning asbestos campaign, for instance) and we should be confident that we can achieve further behavioural changes within workplaces.

**HANDLING AND COMMUNICATIONS**

9 We have asked our Minister to launch the proposed strategy on 15 December, and we are in consultation with the DWP/DH Joint Unit to ensure integrated and aligned messaging with their ‘Improving Lives – the Work, Health and Disability’ Green Paper. This was launched on 1 November, with consultation running to February 2017.

10 The broader handling and communication considerations for the Health and Work Strategy are covered in the ‘Industry Sector Plans’ Board paper, as the two will be integrated. The roadshow events, in particular, will provide opportunities for Board members to show leadership and engage stakeholders on the Health and Work Strategy.
Annex 1 – Proposed text of the Health and Work Strategy

HSE’s Health and Work strategy

The Health and Safety Executive (HSE) has a key role in helping deliver the GB and devolved governments’ wider health and work priorities. As the governments’ chief occupational health adviser, we have expertise in the causes of work-related ill health, and in the controls and measures which can prevent or minimise it.

To help guide policy, we have well-established networks with:

- industry;
- trade unions and the wider workforce;
- local authority co-regulators;
- the professions, academia and beyond.

HSE and local authorities have specific roles as independent regulators, and we will keep acting directly to prevent exposure to harm in workplaces. This regulatory activity is evidence-based, responsive to the changing world of work and guided by HSE’s ongoing research programme.

However, the health of the working population is not solely related to workplace conditions, and governments are concerned with much broader issues such as tackling the employment gap for the disabled, improving productivity, reducing health inequalities and supporting an ageing workforce. So we also aim to play our part in wider developments in England, Scotland and Wales designed to improve workers’ health and business productivity.

Overall, we will regulate, support and seek to influence others as appropriate.

Nature and size of the problem

The health challenges in workplaces are many and varied, from the generic (eg stress that occurs in all industry sectors) to the specific (eg mesothelioma), and from the well-understood to the newly emerging.

An estimated 1.3 million people who worked in 2015/16 were suffering from an illness they believed was caused or made worse by work. This included 1.1 million workers in England, 98,000 in Scotland and 69,000 in Wales. HSE also estimates that there are 13,000 deaths a year linked to past exposures to hazardous substances at work.

The burden of work-related ill health in economic terms is considerable. New cases of work-related illnesses resulting from working conditions today (excluding long-latency illness) led to costs of around £9.4 billion in 2015/16. Past working conditions also continue to cause high costs today, and HSE estimates that new cases of work-related cancer, caused largely by past exposures to carcinogens at work, resulted in costs of around £12.3 billion in 2010.

HSE’s strategic approach

Our approach focuses on:

- working with others, using our expertise for the wider good of workers, businesses (especially SMEs) and government;
- championing the need for prevention;
- focusing our inspection and enforcement activity where it can have the most effect.

Through these actions we will create greater awareness of the harm, costs and preventability of ill health in the workplace, and drive collective action towards businesses managing health as an enabler of productivity and success.

While recognising the limits of our remit, we will foster collaborative relationships with colleagues in other parts of government engaged with common health problems, occupational health advice services and the wider wellbeing agenda to join up our approaches, speak with one voice and build better health outcomes.
Making a real difference requires long-term, coordinated action. We will increase our focus on tackling specific causes of work-related ill health, and bring as many levers as possible to bear on these issues. We will also establish 'what success looks like' statements for our priorities, and develop measurement approaches which include early feedback indicators to inform short-term readjustments as well as outcome measures to track longer-term progress.

Our health and work priorities

HSE cannot tackle everything at once, we need to prioritise. We will therefore focus our major effort on conditions with:

- widespread prevalence;
- the largest lost-time and economic-cost consequences;
- life-limiting or life-altering impacts.

Our evidence shows that these are consistent across Great Britain. HSE will also continue to invest scientific resource into horizon scanning and analysis around the future world of work, which is changing at pace. It is the exposures of today and tomorrow that will lead to the future occupational health burden.

An understanding of this changing landscape and the consequences for health is vital to ensure that the evidence is available to underpin effective prevention, maintain the regulatory framework and inform occupational health service provision.

HSE research will explore the dynamic between both work-related ill health and the impact of general ill health on worker wellbeing. We will share this research and work with developed nations, particularly on their development of tailored approaches to health and work.

HSE's health priorities are set out below. This does not mean that causes of ill health beyond these priorities will be ignored, but they will not be addressed on the same scale.

Occupational stress and related mental health issues:

- Work-related stress is the second most commonly reported cause of occupational ill health in Great Britain, accounting for 37% of all work-related ill health cases, and 45% of all working days lost due to ill health, and is recognised by both industry and unions as a major workplace health issue.

- Workers in all industries and in all sizes of business may be affected, with significantly higher incidences seen in health and social care, local and central government, education and finance. In 2015/16 approximately 488 000 workers said they had experienced stress caused or aggravated by work, of which about 224 000 were new cases, and 11.7 million working days were lost due to stress, depression or anxiety. Our aim is to work in partnership with employers and the wider health and safety community to reduce the number of new cases of ill health caused by work-related stress.

Musculoskeletal disorders: Work-related musculoskeletal disorders are the most common reported cause of occupational ill health in Great Britain, accounting for 41% of all work-related ill health cases and 34% of all working days lost due to ill health. It is recognised by both industry and unions as a major workplace health issue.

Workers in all industries and in all sizes of business may be affected, with significantly higher incidences found in agriculture, forestry and fishing, construction, transportation and storage, and health and social care. In 2015/16 there were approximately 539 000 cases, of which 176 000 were new, and 8.8 million working days were lost as a result. Our aim is to work in partnership with employers and the wider health and safety community, and to carry out targeted interventions in high-risk sectors and occupations, to reduce the number of new cases of ill health caused by work-related musculoskeletal disorders.
**Occupational lung diseases:** Occupational lung disease continues to contribute substantially to work-related ill health in Great Britain, leading to an estimated 13,000 deaths each year. It includes a wide range of conditions from those that develop shortly after exposure (e.g., legionella infection, work-related asthma) to those that develop many years later such as pneumoconiosis, COPD, lung cancer and pleural mesothelioma which are life-limiting and/or life-altering.

It can occur in most industry sectors and is caused by a wide range of agents from biological organisms through to dusts, fumes and vapours with asbestos and respirable crystalline silica being particularly substantial contributors to the burden of lung disease. Our aim is to work in partnership with employers and the wider health and safety community to reduce the incidence rate and number of new cases of occupationally-related lung disease through improving the control of exposure to causative agents.

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**What HSE will do**

To address these priorities we will draw upon the full range of networks, interventions and opportunities for influence available to us to make real reductions in work-related ill health. These will include:

- actively contributing, where competent, to cross-government initiatives in each nation that aim to change behaviour and improve the health of the working population;
- engaging and supporting the wider community who are also striving to make workplaces healthier – whether they are professional and industry bodies, trades unions, individual businesses, charities or researchers;
- using evidence-based and innovative approaches to drive workplace and behavioural changes drawing on the range of interventions available to HSE and local authorities as regulators, from inspection campaigns to digital media;
- maintaining and enhancing the enforcement profile on work-related ill health to highlight the consequences of failure, and to hold those responsible to account;
- reviewing HSE’s Health Research Programme;
- demonstrating the business costs of not tackling health issues by using case studies and measures of health outcomes to inspire greater ambition for the future.

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**Further information**

HSE statistics: www.hse.gov.uk/statistics

For other health and safety information: www.hse.gov.uk
Annex 2 – Health statistics

Work-related stress and mental health issues
- There were an estimated 0.5 million workers suffering from work-related stress, depression or anxiety in 2015/16 (self-reports from the Labour Force Survey).
- Work-related stress accounted for 37% of all cases of self-reported work-related ill health (new or long standing) in 2015/16. Similar proportions were seen when looking at just new cases from self-reports (42%) or from reports by GPs (35%).
- Illustrative estimates of the costs to Britain of new cases of work-related stress suggest that these could be around 55% of the total costs of work-related ill health due to current working conditions.

Work-related musculoskeletal disorders
- There were an estimated 0.5 million workers suffering from work-related musculoskeletal disorders (MSDs) in 2015/16 (self-reports from the Labour Force Survey).
- Work-related musculoskeletal disorders accounted for 41% of all cases of self-reported work-related ill health (new or long standing) in 2015/16. Broadly similar proportions were seen when looking at just new cases from self-reports (33%) or from reports by GPs (50%).
- Illustrative estimates of the costs to Britain of new cases of work-related MSDs suggest that these could be around 25% of the total costs of work-related ill health due to current working conditions.

Work-related lung diseases
- There are an estimated 12,000 deaths each year from work-related lung disease (including cancer) linked to past exposures.
- Work-related lung disease accounts for 90% of all current deaths each year estimated to be linked to past exposures at work, primarily to chemicals and dusts (36% asbestos-related cancer, 21% other respiratory cancer and 33% COPD and other respiratory disease).
- HSE’s recently published research estimating the costs to Britain of work-related cancer in 2010 suggests that respiratory cancers account for around 80% of the total costs of new cases of work-related cancer.
Annex 3 Proposed text for sample plan

Health and Work strategy plan:

Occupational lung disease

Occupational lung disease continues to contribute substantially to work-related ill health. It includes a wide range of conditions, from those that develop shortly after exposure (e.g., legionella infections, work-related asthma) to those that develop many years later such as pneumoconiosis, COPD, lung cancer and pleural mesothelioma which are life-limiting and/or life-altering.

It can occur in most industry sectors and is caused by a wide range of agents, from biological organisms through to dusts, fumes and vapours. Asbestos and respirable crystalline silica (RCS) are particularly substantial contributors to the burden of lung disease.

Current position

In 2016 occupational respiratory disease was estimated to result in approximately 12,000 deaths each year. Estimates from the 2013/14 to 2015/16 Labour Force Survey indicate that around 38,000 people who worked in the previous year (and 141,000 who had ever worked) reported lung or breathing problems that were caused or made worse by work.

There are an estimated 14,000 new cases of breathing or lung problems caused or made worse by work each year, resulting in an estimated 568,000 working days lost.

HSE statistics site: www.hse.gov.uk/statistics

Priorities

As occupational lung disease is associated with a wide range of different agents and working environments, differentiated and targeted intervention approaches will be needed in specific industry sectors. We also need to galvanise learning about ‘what works’ across all those different sectors, and provide national, cross-sector leadership on the prevention of such diseases.

Our aim is to reduce the incidence rate and number of new cases of occupationally-related lung disease through improving the control of exposure to causative agents. Because much occupational lung disease is long-latency in its development, leading indicators are needed to track the effectiveness of our interventions.

As well as tackling the diseases outlined above, HSE continues to develop the evidence base through its research activities to improve understanding and identify any potential new concerns.

The next page shows how we’ll tackle these priorities.

Questions

Once you have finished reading this document please consider the following:

- How do the summary and future priorities align with your perspectives, do they inform and enable a movement for change?
- What are the lessons from initiatives with other occupational health topics which could be adapted and/or applied in relation to occupational lung disease?
- What will success look like in five years’ time?
What HSE will do to #HelpGBworkwell

We will use relevant and appropriate communication activity and tools to raise awareness and drive behaviour change by:

- doing insight research to determine the most appropriate means to influence our target audiences;
- using ‘across the board’ and targeted communications to help deliver the programmes of work determined by the new leadership body.

We will work with a wide range of partners representing employers, workers, public-sector and third-party organisations to raise awareness and improve exposure control by:

- establishing and facilitating a new, authoritative leadership body with a recognised identity and a broadly-based membership drawn from across the whole health and safety system. This will provide direction and coordinate activity on occupational respiratory disease. It will be established and begin implementing an agreed action plan by the end of 2017;
- managing existing respiratory disease-related sector and topic-specific partnerships (and creating new ones), to ensure comprehensive coverage is in place by the end of 2017. These will be integrated with the leadership body’s activities to gain maximum impact and coverage across affected sectors;
- continuing to work closely with existing partners, eg BOHS, IOSH, SGUK and BSIF, that have their own initiatives on respiratory disease.

We will focus regulatory activities on those sectors and activities which give rise to the greatest risk of respiratory disease by:

- prioritising interventions, inspection activity and enforcement on those sector/activity combinations where lung cancer, occupational asthma and legionella pose the highest risks;
- regulating the supply of substances that could cause occupational lung disease so restrictions and sanctions on their supply and use are available and appropriate (eg as UK Competent Authority for a number of EU regulatory permitting regimes for chemicals).

We will develop the evidence base to continue our understanding of current occupational lung diseases, identify emerging issues, seek new and improved means of controlling exposures, and monitor the impact of our activity:

- Asbestos: continuing research on asbestos thoracic lung burden to understand current/past exposures.
- Respirable crystalline silica:
  - continuing to gather evidence about exposure across a range of sectors, and publishing the results;
  - developing methods (including population modelling) for evaluating progress on achieving reductions in RCS-related respiratory disease, and implementing this approach.
- Asthma: continuing our research across relevant sectors and topics on the potential for occupational asthma and infectious disease. This will include woodworking, waste and recycling, livestock and vegetable farming, fish/seafood processing, and using metal working fluids. Research to be published by March 2018.
- Legionella: doing research in collaboration with others to develop alternative and rapid techniques for identifying legionella in water storage systems. Research to be published by March 2018.
- Monitoring impact: developing a suite of leading indicators to monitor the impact of the occupational lung disease programme, by December 2017.
**FOR DECISION**

The HSE Board is invited:

- To agree to consult on proposals to revoke and re-make the Ionising Radiations Regulations 1999 in order to transpose the occupational health and safety elements of Directive 2013/59/Euratom.
- To note the approach to the timing of transposition

**KEY INFORMATION**

**Background**

1. The BSSD (2013/59/EURATOM) sets out arrangements to protect against the dangers arising from exposure to ionising radiation and covers public, occupational and medical exposures. The Directive, which must be implemented by 6 February 2018, brings together 5 previous directives and a Commission recommendation including the 1996 BSSD, updating and amending them as necessary. The Department of Business, Energy and Industrial Strategy (formally DECC and BIS) are the lead government department for the transposition of the BSSD into UK law.

2. Our approach to transposition is to keep the existing regulatory framework, minimising as far as possible any changes. This means both the Ionising Radiations Regulations (IRR) 1999, the subject of this consultation package, and the Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) 2001 will need to be revised, and we will do this by revoking the existing regulations and replacing them with updated versions. There are too many changes to allow us to use amending legislation.

3. REPPiR is cross-cutting legislation which extends into policy areas that are the responsibility of other departments. We are working with all relevant departments to ensure there is a coordinated Government approach to this area. Discussions on how best to implement the relevant BSSD requirements are ongoing. HSE
plans to consult on amendments to REPPIR in conjunction with other departments at a later stage when a cross-government approach has been agreed.

**Timing of transposition**

4. IRR currently require that exposure to ionising radiation is calculated and assessed on a calendar year basis, to ensure that specified dose limits are not exceeded. BSSD significantly reduces one of these dose limits which relates to radiation exposure to the lens of the eye. If this new dose limit is introduced in February 2018, the transposition deadline, it would mean two dose limits would apply in one calendar year. This will cause confusion for business, requiring individual dose limits to be re-calculated for the remainder of the year which, if done incorrectly, could have health and safety implications for workers. A February 2018 implementation will also introduce additional costs for businesses, and information provided by stakeholders suggests that recalculation of doses could costs around £1 million.

5. To avoid these issues, we propose introducing the revised IRR on 1st January 2018, five weeks before the transposition deadline. Stakeholders, including one of our major stakeholders, the Society for Radiological Protection (SRP) fully support this approach. Both the 1985 and 1999 Directives were implemented early for similar reasons.

**Graded Approach**

6. The BSSD introduces a new three tiered risk-based system of regulatory control called the ‘Graded Approach’. The BSSD refers to these levels as notification, registration, and licensing and the higher the radiation protection risk associated with the work, the greater the requirements. Although the BSSD is silent on how the ‘Graded Approach’ is to be implemented it does require the Competent Authority (HSE) to have in place a positive system of authorisation whereby they grant permission to dutyholders for higher risk activities through registration and licensing.

7. We are investigating implementation options for the ‘Graded Approach’, and it is our intention to develop an on-line system that is proportionate, cost effective and, as far as possible, minimises the impact on both dutyholders and HSE.

**Consultation**

8. The draft consultation document is at Annex A. It makes it clear that the preferred approach is to do the minimum necessary to update IRR, with additional requirements for renewal of licenses and registrations and extension of licences to ensure consistency in regulatory approach. The consultation seeks feedback on the preferred approach, draft regulations, impact assessment and revised ACOP.

9. Given the extensive stakeholder engagement carried out to-date and our intention to continue this throughout the transposition process, we propose an eight week consultation period. Subject to the Board’s agreement and Ministerial clearances it is proposed the public consultation is carried out in the first quarter of 2017. Timing constraints mean it may be necessary to make minor editorial
changes to the consultation package, prior to submission to the Minister but it is not anticipated these will be significant. The Board will be consulted again should any substantive issues arise.

FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES
10. The consultation stage Impact Assessment (IA) estimates total net present value costs of around £9.67 million over a ten-year period. Of these, costs to business are around £3.50 million, with the remainder falling to the public sector. The Equivalent Annual Net Direct Cost to Business (EANDCB) is £0.4 million. In accordance with Better Regulation Scrutiny the IA has been signed off by HSE’s Chief Economist and is currently being considered by the Regulation Policy Committee (RPC). The RPC opinion is expected no later than the 7 December 2016. An oral update will be given to the Board if the response is received before the Board meeting.

HANDLING AND COMMUNICATIONS
11. The proposals to transpose the BSSD are the result of significant engagement with key stakeholders and other government departments (Environment Agency, Scottish Environment Protection Agency, Natural Resources Wales, Department of Health and Public Health England, ONR, Cabinet Office, MOD and Scottish and Welsh Governments). We have updated Northern Ireland on our proposals, and they usually copy our regulatory approach when transposing EU legislation.

CONTACT
12. Clare McNicholas, Radiation Policy Team, Chemicals Regulation Division, 0151 951 3972 clare.mcnicholas@hse.gsi.gov.uk
Consultation on the implementation of Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation – Occupational health and safety

This consultative document is issued by the Health and Safety Executive in compliance with its duty to consult under sections 16 and 50 of the Health and Safety at Work etc Act 1974.

Comments should be sent to:

The Radiation Policy Team,
Health and Safety Executive,
2.1 Redgrave Court,
Merton Rd,
Bootle,
Merseyside,
L20 7HS

Email: bssdconsultation@hse.gov.uk

To reach there no later than 30th March 2017

The Executive tries to make its consultation procedure as thorough and open as possible. Responses to this consultation document will be lodged in the Health and Safety Executive’s Knowledge Centre after the close of the consultation period where they can be inspected by members of the public.

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004 (EIR)). Statutory Codes of Practice under the FOIA and EIR also deal with confidentiality obligations, among other things.

If you would like us to treat any of the information you provide, including personal information, as confidential, please explain your reasons for this in your response. If we receive a request under FOIA or EIR for the information you have provided, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will be disregarded for these purposes. Requests for confidentiality should be made explicit within the body of the response.

HSE will process all personal data in accordance with the DPA. This means that personal data will not normally be disclosed to third parties and any such disclosures will only be made in accordance with the Act.
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Consultation by the Health and Safety Executive

The Health and Safety Executive (HSE) consults stakeholders to seek their views on its proposals. It believes that public consultation provides an open and transparent approach to its decision-making. Following consultation, HSE will make a recommendation to the Secretary of State on the best way forward.

Code of Practice on Consultation

HSE is committed to best practice in consultation and to the Government’s Consultation Principles. The Government is improving the way it consults by adopting a more proportionate and targeted approach, so that the type and scale of engagement is proportional to the potential impacts of the proposal. The emphasis is on understanding the effects of a proposal and focussing on real engagement with key groups rather than following a set process.

Additional guidance can be found at: https://www.gov.uk/government/publications/consultation-principles-guidance

How to respond

A summary of the proposal and the questionnaire can be found at: www.hse.gov.uk/consult/condocs/cd282.htm.

Our preferred method for receiving comments is via the online questionnaire. This is the most effective way for us to fully consider and analyse responses.

However, you can also respond by:

• Completing the word questionnaire and sending it by email to: bssdconsultation@hse.gov.uk

• Downloading the questionnaire and sending a written response to:

BSSD Consultation, Radiation Policy Team, 2.1, Redgrave Court, Merton Road, Bootle, Merseyside, L20 7HS

We would be grateful if you could send an email address when you provide your response. This will allow us to inform you when HSE intends to publish information concerning consultation responses on its websites.

Responses must be received by 30th March 2017.

If you require a more accessible format of this document please send details to creative@hse.gov.uk and your request will be considered.
What happens next?

We will acknowledge all responses and give full consideration to their substance in the subsequent proposals. We may contact you again if, for example, we have a query in respect of your response.

We will also tell you when we publish information concerning the consultation responses. We will provide a summary of who responded to this consultation and a summary of the views expressed about each question. This information will be placed on the HSE website.

Complaints

If you have any complaints about the consultation process (as opposed to comments about the issues, which are the subject of the consultation) please address them to:

Jason Cole
HSE Consultation Coordinator
7th Floor, Caxton House
6-12 Tothill Street
London
SW1H 9NA
Email: jason.cole@hse.gov.uk

We aim to reply to all complaints within 10 working days. If you are not satisfied with the outcome, you can raise the matter with the Information Commissioner’s Office at Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF or HSE’s Chief Executive, Dr Richard Judge at Health and Safety Executive, Redgrave Court, Merton Road, Bootle, Merseyside, L20 7HS. You can also write and ask your MP to take up your case with us or with Ministers. Your MP may also ask the independent Parliamentary Commissioner for Administration (the Ombudsman) to review your complaint.
1. Purpose of this consultation

1. This consultation relates to implementation of Directive 2013/59/EURATOM laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation. In order to transpose the requirements of the directive which relate to occupational health and safety the Health and Safety Executive (HSE) is proposing to repeal and replace the Ionising Radiations Regulations 1999.

2. Other Government departments and the Devolved Administrations are in parallel progressing work to implement the parts of the Directive for which they have policy responsibility, and will prepare separate consultations covering the changes they propose implementing. In particular, HSE is working with relevant departments with respect to the implementation of the requirements in the directive concerned with emergency preparedness. Discussions are ongoing and a consultation on proposed changes to the Radiation (Emergency Preparedness and Public Information) Regulations 2001 will be conducted in due course. Northern Ireland and Gibraltar will transpose their own regulations in line with GB timescales.

3. The Department for Business, Energy and Industrial Strategy (BEIS) have overall policy responsibility for civil nuclear sites in England and Wales and their emergency preparedness and as such they are leading the transposition of the BSSD for these areas. Close liaison is required for the devolved administration to assess the impact on them. BEIS has policy responsibility for the transport of radioactive substances. A consultation will be undertaken separately by BEIS.

4. This Consultation Document seeks your;
   - responses to the questions that begin at page 28;
   - views on the proposed transposition approach;
   - feedback on the new regulations, supporting ACOP and draft guidance and
   - views on the initial assessment of the costs and benefits of the proposed changes as set out in the Impact Assessment.

This consultation relates to regulations that will apply in Great Britain.

2. Background

5. The aim of the directive is to update and simplify existing arrangements for radiological protection by bringing five directives and an EU commission recommendation into one directive.

6. The five Directives and one recommendation that have been consolidated are:
The Basic Safety Standards (BSS) Directive

10. The BSS Directive lays down minimum requirements for the protection against the dangers arising from exposure to ionising radiation. The new Basic Safety Standards Directive consolidates and updates existing Euratom provisions for protection against the harmful effects of ionising radiation by replacing five existing Directives and a Commission Recommendation. It covers occupational, medical and public exposure. The Directives being replaced are currently implemented in the UK through a range of legislation that is the responsibility of a number of different government departments. HSE is transposing those elements that relate to occupational exposure. Overall the Directive aims to ensure that:

- Basic Safety Standards, Directive 96/29/Euratom (BSSD96)
- Medical Exposures, Directive 97/43/Euratom
- Outside Workers, Directive 90/641/Euratom (OW)
- Control of high activity sealed radioactive sources and orphan sources 2003/122/Euratom (HASS)
- Public Information Directive 89/618/Euratom
- Radon, Commission Recommendation 90/143/Euratom

7. It also incorporates the latest recommendations from the International Commission on Radiological Protection (ICRP) published in 2007, and harmonises the EU regime with the Basic Safety Standards of the International Atomic Energy Agency (IAEA). The directives being replaced are currently implemented through a range of legislation, enforced by more than 17 different regulators.

8. Directive 2013/59/Euratom was adopted on 5 December 2013. The Department for Business, Energy and Industrial Strategy (BEIS - formerly the Department of Energy and Climate Change (DECC)) has overall UK government responsibility for implementing the revision of the EU Basic Safety Standards Directive (BSSD) as it is known, which must be transposed and implemented (its requirements brought into law) across all Member States by 6th February 2018.

Further information on the Directive can be found on HSE's website: [http://www.hse.gov.uk/aboutus/europe/euronews/dossiers/radiationprotect.htm](http://www.hse.gov.uk/aboutus/europe/euronews/dossiers/radiationprotect.htm)

9. On 23 June, the EU referendum took place and the people of the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the Government will continue to negotiate, implement and apply EU legislation. The assumptions used in this impact assessment have been chosen accordingly.

3. The Basic Safety Standards (BSS) Directive
• minimum standards for ionising radiation are introduced across all Member States;
• dutyholders minimise the risks from ionising radiation to which workers, the public and others may be exposed; and
• risks from ionising radiation are controlled.

4. What is ionising radiation?

11. Ionising radiation is used in a diverse range of industries and sectors including manufacturing, construction, nuclear, engineering, oil and gas production, non-destructive testing, medical, and research. It is also found in naturally occurring radioactive sources, such as radon and the processing of materials containing naturally-occurring radionuclides, such as ores of tin, lead and copper. Although its use brings considerable benefits, it can give rise to harmful effects, so exposure must be managed.

12. People can be exposed to ionising radiation both internally and externally. External exposure can be from a radioactive material or a radiation generator such as an X-ray set. Internal exposure can occur, for example, via inhalation or ingestion of a radioactive substance. Wounds that become contaminated with radioactive material will also lead to radiation exposure. Ionising radiation can provide many benefits, such as medical uses, but can be hazardous to health if not managed correctly and could result in damage to tissues, such as skin burns, hair loss, as well as longer term damage leading to an increased likelihood of cancer. There is no “safe” level of exposure to ionising radiation and high doses, such as those expected in an uncontrolled exposure, can kill within a short period of time.

5. Current legislative provisions for exposure to ionising radiation in the UK

13. The Management of Health and Safety at Work Regulations 1999 covers the general duties which employers have towards employees and members of the public, and employees have to themselves and to each other. Additionally two existing sets of regulations cover the requirements regarding exposures to ionising radiation at work, and protection of the public through emergency preparedness for radiation emergencies.

6. The Ionising Radiations Regulations 1999 (IRR 1999)

14. IRR 1999 sets out a framework to ensure that occupational exposures to ionising radiation are kept as low as is reasonably practicable. The key measures set out in IRR 1999 to reduce exposure are:

• carrying out of a prior risk assessment to consider potential doses;
• the setting of dose limits for those working with radiation – these are legal limits to ensure that exposure is controlled;
• taking steps to restrict exposure via use of the hierarchy of control\(^1\), and use of administrative arrangements;
• designation of areas where high exposures are possible, control of access into these areas, and ensuring specific rules are in place to govern work activity;
• ensuring that employers who work with ionising radiation engage the services of a Radiation Protection Adviser (RPA) to provide specialist advice on compliance with IRR99.

15. These regulations are supported by an Approved Code of Practice (ACOP) ‘Working with Ionising Radiation’ and HSE guidance.\(^2\)

7. **Transposition approach**

16. During the policy development process, HSE considered and analysed a number of regulatory approaches however alternatives to legislation cannot be considered as they would not fulfil our obligations under EU law. Our preferred option is to update existing legislation, incorporating new provisions where necessary. The requirements will be implemented by repealing and replacing the Ionising Radiations Regulations. Where possible we will use copy out, unless doing so decreases clarity in a way that has an adverse impact on health and safety and could result in unnecessary burdens on business.

17. This preferred transposition approach takes account of the Government’s policy on transposing EU Directives and its commitment to regulating only where necessary. In order to minimise costs to stakeholders or to ensure we do not lessen existing levels of radiological protection, or to reduce burdens on business, we have gone further than the minimum requirements of the Directive in some areas. In addition, as part of our implementation of the ‘Graded Approach’ we have extended the scope of licensing so that practices that pose the same risks are subject to the same regulatory controls, as well as requiring renewal of registrations and licenses to ensure that have up to date information on which to base our interventions. This overall approach aligns the transposition of the Directive with current domestic regulation and health and safety policy, avoiding any overlap or contradiction. It also implements the Directive in a way that is proportionate to the risks and takes into account existing controls and therefore minimises the impact on businesses.

18. The transposition approach will be supported by specific, clear, targeted communications which will explain clearly and simply what action needs to be taken by dutyholders. There will also be on-going collaborative

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\(^1\) The hierarchy of control includes elimination, substitution, use of engineering controls, use of administrative controls and personal protective clothes and equipment. More details can be found at [http://www.hse.gov.uk/risk/faq.htm](http://www.hse.gov.uk/risk/faq.htm) see, hierarchy of control.

\(^2\) This can be found in HSE publication “L121 working with ionising radiations”.
working with stakeholders throughout and beyond the transposition period. As part of the development of this proposal, HSE has worked to minimise unnecessary or additional changes for industry and stakeholders to ensure protection of workers.

19. HSE consultation is based on the on the following three options:

**Option 1:** Do minimum – Update the Ionising Radiations Regulations 1999

Option 1 is presented as the ‘do minimum’ option, which demonstrates the costs and benefits of implementing the Directive in a way that does not introduce new requirements which go beyond the scope of the Directive. In this option, HSE would implement the Directive by updating (‘repeal and replace’) IRR.

**Option 2:** As per Option 1 but with a requirement for the renewal of licences and registrations under the ‘Graded Approach’

Option 2 implements the Directive in the way described for Option 1 but contains an additional requirement for licences and registrations under the ‘Graded Approach’ to be renewed periodically. This goes beyond the scope of the Directive and results in additional costs to business. However, this is necessary to provide up-to-date information on dutyholders and ensure the effective operation of the Graded Approach system.

**Option 3:** As per Option 2 but with an extension to licencing requirements to cover certain high-risk practices to ensure consistency in the regulatory approach

Option 3 contains all of the same provisions as Option 2 but extends the requirements for licencing under the ‘Graded Approach’ to cover certain high-risk practices, which would need to register under Option 2. While licencing is a more stringent requirement than registration, extending licences in this way may reduce costs to business compared with Option 2 (which does not extend licences).

‘Consultation Impact Assessment’ (Annex (iii) Section 6).

8. **Why are new regulations needed?**

20. New regulations are needed because some of the requirements of the Directive go further than our existing legislation. A draft of ‘The Ionising Radiation Regulations 2017’ is at Annex (i). Please note draft regulations will be subject to legal checks following the consultation which may require amendments to be made.
9. What will the new regulations mean for stakeholders?

21. Many of the requirements of the BSS Directive are already part of the UK’s health and safety regime and are covered by existing legislation and practices, including IRR 1999, REPPiR 2001 and the Management of Health and Safety Regulations 1999. There are an estimated 50,000 dutyholders in the UK will be affected by some or all of the changes required in IRR 1999 as a consequence of the Directive. Where possible the UK was successful in keeping the changes to the existing regulatory framework to a minimum.

10. Changes to the Ionising Radiation Regulations (IRR)

22. Dose Limit for exposure to the lens of the eye and implementation of the Directive

One of the changes to be introduced relates to one of the dose limit for radiation exposure to the lens of the eye, with a reduction of equivalent dose from 150 mSv to 20 mSv in a year. IRR 1999 currently require that exposure to ionising radiation is calculated and assessed on a calendar year basis, so if this new dose limit is introduced in February 2018, the transposition deadline, it would mean two dose limits would apply in one calendar year. This will cause confusion, requiring individual dose limits to be re-calculated for the remainder of the year which, if done incorrectly, could have health and safety implications for workers. It will also introduce additional costs for businesses. We therefore propose to transpose the BSSD on 1st January 2018 five weeks before the transposition deadline, and because of the links between IRR and REPPiR we propose implementing the entire amended regulatory package on this date. Further details of the impact of this change can be found in the ‘Consultation Impact Assessment’ (Annex (iii) para’s 20 – 23).

23. Graded Approach

Another change that is likely to result in additional costs for stakeholders is the introduction of a new three tiered risk-based system of regulatory control called the ‘Graded Approach’. The BSSD refers to these levels as notification, registration, and licensing and the higher the radiation protection risk associated with the work, the greater the requirements. It requires the Competent Authority (HSE) to have in place a positive system of authorisation whereby they grant permission to dutyholders for higher risk activities through registration and licensing. We are investigating implementation options for the ‘Graded Approach’, and it is our intention to develop an on-line system that is proportionate, cost effective and as far as possible minimises the impact on both dutyholders.

24. To ensure that we have sufficient information to inform our inspection regime we propose periodically renewing licenses and registrations. We also propose extending licensing requirements to a small number of further
practices where the risks are considered to be the same, if not higher, than those the Directive requires to be licensed. This will ensure a consistent regulatory approach to higher radiation risk industries. HSE is proposing to use the licencing information requirements specified by the Directive to remove the current administrative procedure of requiring notification to HSE seven days in advance of any site radiography. Restrictions could be placed on site radiography practices within specific conditions in any licence documentation issued, thus enabling the removal of the existing requirement to notify HSE seven days in advance of every instance of site radiography. Further details of the impact of this change can be found in the Consultation Impact Assessment’ (Annex (iii) para’s 197 – 209 and 227).

25. The other new key requirements that stakeholders will have to consider are:

- **Weighting factors**: Introduction of new weighting factors for dosimetry. HSE will adopt the new radiation and tissue weighting factors. This requirement will need to be added to IRR, guidance on methodology will be provided.

- **Record retention**: Change from 50 years to not less than 30 years retention after the last day of work. HSE propose to accept the BSSD approach.

- **Notification and recording of significant events**: HSE have interpreted significant event as an event which results in an accident accidental. Currently, IRR does not require the recording and analysis of an accidents and HSE propose to link this to the IRR requirement for contingency plans.

- **Outside workers**: the definition of outside workers in the regulations to be amended include all those who work with radiation to ensure outside workers are afforded the same protection as those workers employed by the employer responsible for the work.

- **Public dose estimation**: Procedures are required that estimate the does to members of the public. Although environmental regulations cover most practices, IRR will be amended to cover those that do not. Guidance on methodology will be provided.

- **Appointed doctor**: HSE intend to remove the requirement for a registered medical practitioner to be appointed ‘in writing’ for the purposes of these Regulations.

- **Authorisation of the whole body dose limit in special cases**: HSE will authorise the application of an effective dose limit of 100 mSv over five years (with no more than 50 mSv in a single year) rather than dutyholders only giving prior notification.
• **Dosimetry services**: The BSSD requires the recognition of the ability of dosimetry services to perform certain dosimetry functions by the competent authority. HSE is to adopt the BSSD terminology of “recognition” in place of “approval” as part of revising the current dosimetry service regime. The timing of this change will draw industry and wider stakeholder attention to the differences between old procedures and the new one.

• **Authorisation of 5 year averaging for dose limit to lens of the eye**: Dutyholders can make use of this flexibility but this will be subject to conditions specified by HSE.

• **Radon**: IRR expresses the radon reference level over a 24 hour period, while the BSSD expressed the reference level on an annual basis. Calculations show the current IRR requirement is equivalent to the annual average in BSSD. HSE will therefore adopt the value in the BSSD.

Specific details of the potential impacts of these changes can be found in the Consultation Impact Assessment (Annex (iii) Sections 14-19).

**Additional policy changes proposed to IRR that are beyond the scope of the Directive.**

26. The following proposals have not been assessed during the stakeholder engagement process to develop the impact assessment. They have been identified as possible changes during policy development and review of IRR 1999.

• **Removal of Subsidiary Dose Limit for the Abdomen of a Woman of Reproductive Capacity** – We propose removal of the subsidiary dose limit for the abdomen of a woman of reproductive capacity. The 13 mSv limit is not part of BSSD and evidence indicates the limit is rarely used. In addition to the annual dose limit of 20 mSv for employees there are provisions that require all radiation exposures to be ALARP and one that requires that a pregnant woman does not have conditions of exposure that are likely to lead to an effective dose to the foetus of more than 1 mSv during the declared term of pregnancy. These provisions are thought sufficient to protect an unborn child.

• **Equipment used for medical exposure (Reg 32) and comforters and carers**: Department of Health (DH) is planning to implement all of the requirements of the BSSD’s Medical Exposures Chapter. This could mean that clinical aspects of Regulation 32 (of IRR), and regulation of exposure to comforters and carers will be moved to new DH regulations.
• **Appeals process**: Medical appeals by an employee currently made to HSE within three months of the employee being notified of the Appointed Doctor’s decision. HSE propose introducing a time limit of 28 days for consistency with other regulations.

• **Naturally Occurring Radioactive Material (NORM) – application of dose limits** - BSSD states specifically that dose limits shall apply to all authorised (registered and licensed) practices, but only requires that work with NORM is notified and so not subject to dose limits. Currently, dose limits apply to all work with radiation, including work with NORM, and disapplying the dose limits is lessening radiological protection. HSE therefore propose to keep the current requirements even though they go beyond the requirements of the BSSD.

• **Radon notification prior to remediation** - BSSD requires notification for workplaces that exceed the national radon reference level (annual average not higher than 300 Bq m$^{-3}$) only after remediation action has failed to reduce the level of radon below this reference level. Current requirements are that HSE has to be notified if radon is detected above the reference level. Adopting the BSSD requirements could lessen radiological protection so HSE propose that radon notification above the reference level is required regardless of remediation activity.

### 11. Proposed changes to Approved code of practice supporting Ionising Radiation Regulations

<table>
<thead>
<tr>
<th>IRR 1999 Para and regulation No</th>
<th>Current ACOP text</th>
<th>Change in ACOP text</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Reg 2(1)</td>
<td>In the special case of substances containing naturally occurring radionuclides used in work other than a practice, their activity cannot be disregarded for the purposes of radiation protection where their use is likely to lead to employees or other people receiving an effective dose of ionising radiations in excess of 1 millisievert in a year.</td>
<td><strong>Possible Addition.</strong> The identified industries using NORM listed in BSSD may be considered as a new</td>
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<tr>
<td>45 Reg 7</td>
<td>This prior risk assessment should enable the employer to determine:</td>
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</tr>
<tr>
<td><strong>(a)</strong></td>
<td>what action is needed to ensure that the radiation exposure of all persons is kept as low as reasonably practicable (regulation 8(1))</td>
<td></td>
</tr>
<tr>
<td><strong>(b)</strong></td>
<td>what steps are necessary to achieve this control of exposure by the use of engineering controls, design features, safety devices and warning devices (regulation 8(2)(a)) and, in addition, by the development of systems of work (regulation 8(2)(b));</td>
<td></td>
</tr>
<tr>
<td><strong>(c)</strong></td>
<td>whether it is appropriate to provide personal protective equipment and if so what type would be adequate and suitable (regulation 8(2)(c));</td>
<td></td>
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<tr>
<td><strong>(d)</strong></td>
<td>whether it is appropriate to establish any dose constraints for planning or design purposes, and if so what values should be used (regulation 8(3));</td>
<td></td>
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<tr>
<td><strong>(e)</strong></td>
<td>the need to alter the working conditions of any female employee who declares she is pregnant or is breastfeeding (regulation 8(5));</td>
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<tr>
<td><strong>(f)</strong></td>
<td>an appropriate investigation level to check that exposures are being restricted as far as reasonably practicable (regulation 8(7));</td>
<td></td>
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<tr>
<td><strong>(g)</strong></td>
<td>what maintenance and testing schedules are required for the control measures selected (regulation 10);</td>
<td></td>
</tr>
<tr>
<td><strong>(h)</strong></td>
<td>what contingency plans are necessary to address reasonably foreseeable accidents</td>
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</tbody>
</table>

Addition to further clarify the link between prior risk assessment and the requirements for leak testing.
(regulation 12);

(i) the training needs of classified and non-classified employees (regulation 14);

(j) the need to designate specific areas as controlled or supervised areas and to specify local rules (regulations 16 and 17);

(k) the actions needed to ensure restriction of access and other specific measures in controlled or supervised areas (regulation 18);

(l) the need to designate certain employees as classified persons (regulation 20);

(m) the content of a suitable programme of dose assessment for employees designated as classified persons and for others who enter controlled areas (regulations 18 and 21);

(n) the responsibilities of managers for ensuring compliance with these Regulations; and

(o) an appropriate programme of monitoring or auditing of arrangements to check that the requirements of these Regulations are being met.

Dose sharing should not be used as a primary means of keeping exposures below the dose limits. Rather, the radiation employer should give priority to improving engineering controls and adopting other means of restricting exposure, including changing the methods of work. However, if a choice has to be made between restricting doses to individuals and restricting doses to a group of persons, priority should be given to keeping individual doses as far below dose limits as is reasonably practicable.

Radioactive materials, including those in the form of sealed sources, should not be held or directly manipulated in the hand (or close to the hand) if it is practicable for the task to be completed by other means, unless the skin of

**Partial deletion** – First sentence to remain as ACOP, the remaining text redrafted and move to guidance.

**Delete** – move to guidance
<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Text</th>
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<tbody>
<tr>
<td>79 Reg 8(2)</td>
<td>Where reasonably practicable, work involving exposure to external radiation must be done in a room, enclosure, cabinet or purpose-made structure which is provided with adequate shielding. In other cases, adequate local shielding should be used as far as reasonably practicable. Shielding, including beam collimation, will normally be adequate if designed to reduce dose rates below 7.5 microsieverts per hour in specific locations where persons will be working. If the device is designed for use in public areas or where there is continuous access to the working area by employees or other persons not directly involved in the work, the shielding should be designed to reduce dose rates to the lowest level that is reasonably practicable. In this case, the dose rate should be so low that it is unnecessary to designate the area around the device as a supervised area. <strong>Paragraph redrafted to focus on key information.</strong></td>
</tr>
<tr>
<td>81 Reg 8(2)</td>
<td>Fluoroscopic devices should be provided with viewing facilities which do not permit direct vision of the fluoroscopy screen. <strong>Potential deletion</strong> HSE is checking with stakeholders over the validity of this paragraph in current operations.</td>
</tr>
<tr>
<td>83 Reg 8(2)</td>
<td>Radiation employers should give priority to the containment of radioactive substances as a means of preventing dispersal or contamination. Where such containment alone is not sufficient to give the required protection, ventilation should be provided. A building, room or enclosure being built or modified for work with unsealed radioactive material should incorporate design features which take into account the risk of contamination likely to arise from the work. In particular, radiation employers should take <strong>Partial deletion – keep first 2 sentences as ACOP, rest move to guidance</strong></td>
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<tr>
<td>Steps to ensure ease of cleaning and decontamination of worktops, floors, etc. There should also be provision for safe decommissioning or dismantling of equipment which may have become internally contaminated.</td>
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<tr>
<td>Where control systems permit, interlocks or trapped key systems should be provided and properly used where they can prevent access to high dose rate enclosures (for example in which employed persons could receive an effective dose greater than 20 millisieverts or an equivalent dose in excess of a dose limit within several minutes when radiation emission is under way). They should be fitted so that the control system will ensure an exposure:</td>
<td></td>
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<tr>
<td>(a) cannot commence while the access door, access hatch, cover or appropriate barrier to the enclosure is open;</td>
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<tr>
<td>(b) is interrupted if the access door, access hatch, cover or barrier is opened; and</td>
<td></td>
</tr>
<tr>
<td>(c) does not recommence on the mere act of closing a door, access hatch, cover or barrier.</td>
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<tr>
<td>The radiation employer should require a check to be made with a suitable radiation monitoring instrument after each exposure using high dose rate sealed source equipment (such as that generally used for industrial radiography or processing of products) unless reliance can be placed on effective devices to ensure that the equipment has been restored to a safe state. The purpose is to establish that the sealed source has fully retracted to its shielded position and that the area is safe to enter.</td>
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<tr>
<td>The term 'adequate' in regulation 8(2)(c) refers to the ability of the equipment to protect the wearer. The term 'suitable' refers to the correct matching of the equipment to the job and the person. To be considered 'adequate and suitable' personal protective equipment should be correctly selected and used.</td>
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<tr>
<td>126</td>
<td>Reg 8(3)</td>
</tr>
<tr>
<td>165</td>
<td>Reg 10(1)</td>
</tr>
<tr>
<td>183</td>
<td>Reg 11(1)</td>
</tr>
<tr>
<td>216</td>
<td>Reg 13(1)-(3)</td>
</tr>
<tr>
<td>Regulation</td>
<td>Text</td>
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<tr>
<td>232 Reg 13(4)</td>
<td>Radiation employers who need advice in relation to plans for off-site emergencies should provide, or may arrange to share, a specialised radiation protection unit. Such units should be distinct from production and operational units and authorised to perform radiation protection tasks.</td>
</tr>
</tbody>
</table>
| 248 Reg 16(1) | Special procedures should always be necessary to restrict the possibility of significant exposure, and therefore employers should designate controlled areas, in cases where:  
- (a) the external dose rate in the area exceeds 7.5 microsieverts per hour when averaged over the working day;  
- (b) the hands of an employee can enter an area and the 8-hour time average dose rate in that area exceeds 75 microsieverts per hour;  
- (c) there is a significant risk of spreading radioactive contamination outside the working area;  
- (d) it is necessary to prevent, or closely supervise, access to the area by employees who are unconnected with the work with ionising radiation while that work is under way; or  
- (e) employees are liable to work in the area for a period sufficient to receive an effective dose in excess of 6 millisieverts a year. | Paragraph retained and expanded to include ACOP 249 (b) |
| 249 Reg 16(1) | In addition, an area should be designated as a controlled area if the dose rate (averaged over a minute) exceeds 7.5 microsieverts per hour and:  
- (a) the work being undertaken is site radiography; or  
- (b) employees untrained in radiation protection are likely to enter that area, unless the only work with ionising radiation involves a radioactive substance dispersed. | Deletion. Bullet (b) to be combined with paragraph 248. |
in a human body and none of the conditions in the previous paragraph apply.

In this context, site radiography means any radiography of inanimate objects other than that which is carried out in an enclosure or cabinet that restricts the dose rate (averaged over a minute) outside the enclosure to 7.5 microsieverts per hour.

| 272 Reg 17(1) | Written local rules must identify the key working instructions intended to restrict any exposure in that controlled or supervised area. The details given in these rules should be appropriate to the nature and degree of the risk of exposure to ionising radiations. The rules must cover work in normal circumstances and also the particular steps to be taken to control exposure in the event of a radiation accident, as set out in the contingency plan required by regulation 12. Local rules for a controlled area should include a summary of the arrangements for restricting access into that area, including the written arrangements covering those who are not classified persons. |
| Delete - the first sentence is moved to regulation in line with the Directive). The rest of the paragraph either replicates the regulation or is only appropriate for guidance. |

| 339 Reg 19(1) | For areas designated on the basis of external radiation, adequate monitoring must include measurement of dose rates (averaged over a suitable period if necessary). For areas designated on the basis of internal radiation, adequate monitoring should include measurements of air activity and surface contamination where appropriate, taking into account the physical and chemical states of the radioactive contamination. In either case, the monitoring must be sufficient to indicate whether levels of radiation and contamination are satisfactory for continuing work with ionising radiation. |
| Delete – final sentence to go into guidance, remainder into regulations |

| 341 Reg 19(1) | Employers carrying out the monitoring should be familiar with the proper use of the instruments and know how to interpret and record the results correctly. |
| Delete – move to guidance |

<p>| 347 Reg 19(2) | Monitoring instruments used for measuring external radiation should be suitable for the |
| Delete – sufficiently |</p>
<table>
<thead>
<tr>
<th>Regulation</th>
<th>Text</th>
<th>Action</th>
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<tbody>
<tr>
<td>Reg 19(2)</td>
<td>Monitoring equipment should normally be tested and thoroughly examined at least once every year.</td>
<td>Retain: Add text to link this to Regulation 7 (prior risk assessment)</td>
</tr>
<tr>
<td>Reg 19(3)</td>
<td>All instruments should be individually calibrated before first use and as part of the annual examination and test.</td>
<td>Delete – move to guidance</td>
</tr>
<tr>
<td>Reg 19(3)</td>
<td>Qualified persons should possess the necessary expertise in instrumentation, theory and practice appropriate to the type of instrument to be tested.</td>
<td>Delete – move to guidance</td>
</tr>
<tr>
<td>Reg 19(4)</td>
<td>Suitable monitoring records should include the date, time and place of monitoring and confirm that controlled and supervised areas are correctly designated and show where levels are being approached which may require investigatory or remedial action to be taken. For areas designated on the basis of external radiation there should be an indication of the nature and quality of the radiation in question. For areas designated on the basis of internal radiation the results should indicate the nature and physical and chemical states of radioactive contamination unless this is inappropriate.</td>
<td>Delete – Move first sentence to guidance. The text from the second sentence onwards will be moved into regulation 19(1) via copy out from the Directive.</td>
</tr>
<tr>
<td>Reg 21(5)</td>
<td>Entries in passbooks should only be made by people who have been authorised by the approved dosimetry services or the appropriate employer to make such entries. Suitable arrangement should include written instructions, specifying who does what and when, unless this would clearly be</td>
<td>Partial deletion - keep first sentence as ACOP, rewrite second</td>
</tr>
<tr>
<td><strong>Reg 22(1)-(2)</strong></td>
<td><strong>Reg 23(3)-(8)</strong></td>
<td><strong>Reg 23(3)-(8)</strong></td>
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<td><strong>415</strong></td>
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| inappropriate in the circumstances. | The employer's investigation should take account of the following where relevant:  
(a) details of the pattern of work of the individual such as the time spent in particular controlled and supervised areas;  
(b) measurements from any additional dosimeter or direct reading device worn by the person concerned;  
(c) individual measurements made on other employees carrying out the same work with ionising radiations; and  
(d) the results of monitoring for controlled and supervised areas carried out in accordance with regulation 19. | An estimate of the dose received should be regarded as much greater than or much less than the original entry in the dose record for a particular period if:  
(a) the dose received differs from the original entry in the dose record by at least 1 millisievert for recorded doses of 1 millisievert or less; or  
(b) the dose received differs from the original entry in the dose record by a factor of 2 or more for recorded doses in excess of 1 millisievert but less than the relevant dose limit; or  
(c) the dose received differs from the original entry in the dose record by a factor of 1.5 or more for recorded doses above the relevant dose limit. | The employer's investigation into the circumstances of the exposure should take account of:  
(a) relevant information provided by the approved dosimetry service;  
(b) details of the pattern of work of the individual such as the time spent in | Delete –  
Move to guidance  
| Retained and redrafted to clarify requirement  
<p>| Full deletion, information moved to guidance |</p>
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<tr>
<td>23</td>
<td>particular controlled and supervised areas; (c) measurements from any additional dosemeter or direct reading device worn by the person concerned; (d) individual measurements made on other employees carrying out the same work with ionising radiations; and (e) the results of monitoring for controlled and supervised areas carried out in accordance with regulation 19.</td>
</tr>
<tr>
<td>422 Reg 23(3)-(8)</td>
<td>The information used to estimate the dose received will be adequate if it: (a) shows that there is reasonable cause to believe that the dose received by the classified person was much greater than or much less than the dose recorded in the dose record; and (b) includes sufficient information to permit a reliable reconstruction of the exposure conditions for the person during the relevant dose assessment period. The investigation report should at least include the information in (a) and (b).</td>
</tr>
<tr>
<td>446 Reg 24(2)</td>
<td>Adequate medical surveillance should include: (a) a medical examination before first being designated as a classified person in a post involving work with ionising radiations; (b) periodic reviews of health at least once every year; (c) special medical surveillance of an employee when a relevant dose limit has been exceeded; (d) determining whether specific conditions are necessary; and (e) a review of health after cessation of</td>
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<td>24</td>
<td>work where this is necessary to safeguard the health of the individual.</td>
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<tr>
<td>447 Reg 24(2)</td>
<td>The nature of the medical surveillance for each individual should take account of the nature of the work with ionising radiation and that individual's state of health.</td>
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<tr>
<td>448 Reg 24(2)</td>
<td>Medical surveillance carried out following an investigation under regulation 25 should include a special medical examination of the individual if that person has received an effective dose of ionising radiation in excess of 100 millisieverts in a year or an equivalent dose of at least twice any relevant annual dose limit.</td>
</tr>
<tr>
<td>466 Reg 24(7)-(8)</td>
<td>The records made available to the appointed doctor or employment medical adviser before the periodic review of health is carried out should always include any relevant records of sickness absence for the person as well as the health record and copies of the summaries of the dose record provided by the approved dosimetry service and retained in accordance with regulation 21(7).</td>
</tr>
<tr>
<td>483 Reg 27(3)</td>
<td>The purpose of a leak test is to show that the mechanisms for preventing dispersal of radioactive substances are functioning as intended. The assessment required by regulation 7 should identify potential ways in which containment could be lost and their likelihood of occurring. A test method and a frequency of testing should then be chosen that is capable of detecting leakage of radioactivity from the source or article before a radiation risk arises. Where testing is appropriate under normal operating conditions, the interval between tests should not exceed two years.</td>
</tr>
<tr>
<td>493 Reg 28</td>
<td>The procedures for accounting should ensure that the location of radioactive substances is known and, as a consequence, losses of significant quantities can quickly be identified. A frequency for checking the location of the source should be determined, taking account</td>
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Retain – addition of “theft” into the accounting requirements based on
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<th>Page 25</th>
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<tr>
<td><strong>Reg 28</strong></td>
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<td><strong>Delete – move to guidance</strong></td>
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<td><strong>Reg 28</strong></td>
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<td>(a)</td>
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<tr>
<td>(b)</td>
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<tr>
<td><strong>Reg 31(2)</strong></td>
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<tr>
<td><strong>Delete – move to regulations</strong></td>
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<tr>
<td><strong>Reg 31(2)</strong></td>
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<tr>
<td><strong>Delete – explain in guidance (link to regulation 13)</strong></td>
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<td><strong>Reg 32(3)-(4)</strong></td>
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<tr>
<td><strong>Amend regulation – dependent on outcome of DH proposal</strong></td>
</tr>
<tr>
<td>539 Reg 32(3)-(4)</td>
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<td>540 Reg 32(3)</td>
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give special attention to equipment used for medical exposure:
- of children;
- as part of a health screening programme;
- involving high doses to the patient such as interventional radiology, computed tomography or radiotherapy.

Department of Health (DH) are planning to implement all of the requirements of the BSSD’s Chapter VII that pertain to medical exposure as defined within Article 4 i.e. exposure incurred by patients and asymptomatic individuals as part of their diagnosis or treatment, carers and comforters and research volunteers. It is expected that aspects relating to these exposures, currently included in Regulation 32 (of IRR), and regulation of exposure to comforters and carers will be moved to new DH regulations. Regulation of aspects relating to occupational and public exposure resulting from medical practices will be retained by HSE.

dependent on outcome of DH proposal

12. Impact of the Directive on the UK

27. An Impact Assessment (IA) (at Annex (iii)) has been prepared detailing the costs associated with implementing the new occupational health and safety requirements of the Directive. Cost details have been provided by the various industries and sectors with whom HSE has engaged with. The IA estimates that implementation imposes a ten-year net present value cost on society of around £9.67 million. Of these costs, 36% or £3.50 million would be borne by the public sector. The draft IA has been considered by the Regulatory Policy Committee (RPC), an independent body responsible for scrutinising the quality of the analysis and evidence presented in IAs. They have given their opinion that the assessment is fit for purpose.

13. Consultation questions

28. We are seeking answers to questions in a number of areas. The questions we would like you to consider are listed in the table below:
1. Should HSE implement the Directive as proposed?

   Strongly agree  
   Agree  
   Neither agree nor disagree  
   Disagree  
   Strongly disagree  

   If you disagree or strongly disagree, please state why.

2. Do you have any comments on the draft ‘Ionising Radiation Regulations 2017’ Annex (i) Or those key requirements at Section 10, for example?

   If yes please provide details.

3.1 Do you think that the proposed changes make the revised ACoP:

   More easy to understand than the current ACoP?  
   Less easy to understand than the current ACoP?  
   About the same to understand as the current ACoP?  

   If not, which parts are not clear and why?

3.2 Are there any impacts from revision of this ACOP that we should be aware of?

4. HSE is intending to implement IRR on the 1st January 2018, which is 5 weeks earlier than the expected EU implementation deadline. See para 22 for the full reasons for this decision.

   Should HSE implement IRR on the 1st January 2018? If not, please give details.

The following questions relate to the cost estimates described in Chapter 2 of the Impact Assessment at Annex (ii)

5.1 Additional costs arising from changes to the eye dose level

   Does your organisation expect to classify any additional workers as a result of the proposed change in the classification level for eye doses from 45 mSv to 15 mSv? [yes/no]

   • If so, approximately how many? Please select:
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| 5.2 | Does your organisation expect to implement any additional control measures to reduce eye doses in order to comply with the proposed 20 mSv eye dose limit? [yes/no]  
- If so, what types of controls?  
- Please provide details of the likely costs of implementing these controls. Include where possible: purchase costs, installation costs, staff time, contractor costs. |
| 5.3 | Does your organisation expect any impacts arising from the change in eye dose limit or classification level, other than those included in the Impact Assessment? [Yes/no]  
If yes, please provide describe these impacts and, where possible, quantify the additional costs arising from them. |
| 6.1 | **Additional costs arising from changes to the definition of ‘outside workers’**  
The BSSD widens the definition of Outside Workers (OWs) to include non-classified OWs.  
Will the change in definition (i.e. to include non-classified outside workers in the definition of outside workers) have any impacts on your business? |
| 6.2 | Please describe and, where possible, quantify, any additional costs that your organisation would incur because of the change in definition. |
| 7.1 | **Additional costs from recording and analysing events that cause (or potentially cause) the contingency plan to be enacted**  
Does your organisation currently record and analyse events that cause (or which might potentially cause) a contingency plan to be enacted? [Yes/No]  
If ‘No’, approximately how many such additional events would you expect to record annually, if any? |
| 7.2 | How much would it cost to record and analyse each specific event? (Please, as far as possible, describe how much time would be required, on average, the job title(s) of staff involved, and the cost of that time (i.e. the wage rate of the person(s) performing the task).) |
8. **Table 4, on page 48 of the Impact Assessment describes the changes to regulations that are not expected to lead to significant costs to business.**

What do you think about HSE’s assessment of these changes?
- Strongly agree
- Agree
- Slightly Agree
- Slightly Disagree
- Disagree
- Strongly Disagree

If you disagree, please provide more details.

9. **Do you have any other comments on the assumptions or cost estimates in Chapter 2 of the Impact Assessment for the changes to the Ionising Radiations Regulations?**

10. **Are there any further comments you would like to make on the issues raised in this consultative document?**
Glossary of Acronyms

EU  European Union
FOIA  Freedom of Information Act 2000
HSE  Health and Safety Executive
IA  Impact Assessment
MHSWR  Management of Health and Safety at Work Regulations 1999
UK  United Kingdom
2017 No.

HEALTH AND SAFETY

The Ionising Radiations Regulations 2017

Made - - - - ***

Laid before Parliament

Coming into force

The Secretary of State is a Minister designated for the purposes of section 2(2) of the European Communities Act 1972 ("the 1972 Act") in relation to measures relating to the basic safety standards for the protection of the general public and workers against the dangers of ionising radiation.

The Secretary of State makes these Regulations in exercise of the powers conferred by sections 15(1), (2), (3)(a), (4)(a), 5(b), (6)(b) and (9), 43(2), (4), (5) and (6), 52(2) and (3), (80)(1) and 82(3)(a) of, and paragraphs 1(1) and (2), 3, 6 to 9, 11, 13, 14, 15(1), 16, 20 and 21(a) and (b) of Schedule 3 to, the Health and Safety at Work etc. Act 1974 ("the 1974 Act") and, section 2(2) of the 1972 Act.

Apart from the modifications referred to in the next paragraph, the Secretary of State makes these Regulations for the purpose of giving effect without modifications to proposals submitted by the Health and Safety Executive under section 11(3) of the 1974 Act after consulting in accordance with section 50(3)(e) of that Act.

It appears to the Secretary of State that—

the amendments to secondary legislation referred to in Schedule 9; and

the revocation[s] in relation to the instrument[s] referred to in regulation 43,

are expedient as set out in section 80(1) of the 1974 Act.

ARRANGEMENT OF REGULATIONS

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2 Interpretation
3 Application
4 Duties under the Regulations
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5 Notification of specified work
6 Registration of specified practices
7 Licensing of specified practices
8 Prior risk assessment etc
9 Restriction of exposure
10 Personal protective equipment
11 Maintenance and examination of engineering controls etc and personal protective equipment
12 Dose limitation
13 Contingency plans

PART III ARRANGEMENTS FOR THE MANAGEMENT OF RADIATION PROTECTION

14 Radiation protection adviser
15 Information, instruction and training
16 Co-operation between employers

PART IV DESIGNATED AREAS

17 Designation of controlled or supervised areas
18 Local rules and radiation protection supervisors
19 Additional requirements for designated areas
20 Monitoring of designated areas

PART V CLASSIFICATION AND MONITORING OF PERSONS

21 Designation of classified persons
22 Dose assessment and recording
23 Estimated doses and special entries
24 Dosimetry for accidents etc
25 Medical surveillance
26 Investigation and notification of overexposure
27 Dose limitation for overexposed employees
PART VI ARRANGEMENTS FOR THE CONTROL OF RADIOACTIVE
SUBSTANCES, ARTICLES AND EQUIPMENT

28 Sealed sources and articles containing or embodying radioactive substances
29 Accounting for radioactive substances
30 Keeping and moving of radioactive substances
31 Notification of certain occurrences
32 Duties of manufacturers etc of articles for use in work with ionising radiation
33 Equipment used for medical exposure
34 Misuse of or interference with sources of ionising radiation

PART VII
DUTIES OF EMPLOYEES AND MISCELLANEOUS

35 Duties of Employees
36 Approval of dosimetry services
37 Enforcement
38 Defence on contravention
39 Exemption certificates
40 Extension outside Great Britain
41 Modifications relating to the Ministry of Defence etc.
42 Transitional Provisions and Savings
43 Consequential Amendments and Revocation
44 Review
Signature(s)

SCHEDULES
SCHEDULE 1 Work not Required to be Notified under Regulation 5
SCHEDULE 2 Information for licensing: matters to which the Executive must have regard
SCHEDULE 3 Dose Limits
SCHEDULE 4 Matters in Respect of which a Radiation Protection Adviser Must be Consulted
SCHEDULE 5 Particulars to be Entered in the Radiation Passbook
SCHEDULE 6 Particulars to be Contained in a Health Record
SCHEDULE 7 Quantities and Concentrations of Radionuclides
SCHEDULE 8 Transitional Provisions and Savings
SCHEDULE 9 Consequential Amendments

PART 1
PRELIMINARY

Citation and commencement

1. — (1) These Regulations may be cited as the Ionising Radiations Regulations 2017.
   They come into force on [1st January 2018].

Interpretation

— (2) In these Regulations, unless the context otherwise requires—
   “accelerator” means an apparatus or installation in which particles are accelerated and which emits ionising radiation with an energy higher than 1MeV;
   “appointed doctor” means a registered medical practitioner who meets recognition criteria as may from time to time be specified in writing by the Executive;
   “approved” means approved for the time being in writing for the purposes of these Regulations by the Executive and published in such form as the Executive considers appropriate;
   “approved dosimetry service” means a dosimetry service approved in accordance with regulation 36;
   “calendar year” means a period of 12 calendar months beginning with the 1st January;
   “classified outside worker” means a classified person who carries out services in the controlled or supervised areas of any employer (other than the controlled or supervised areas of their own employer);
   “classified person” means--
   (a) a person designated as such pursuant to regulation 21(1); and
   (b) in the case of an outside worker employed by an undertaking in Northern Ireland or in another member State, a person who has been designated as a Category A exposed worker within the meaning of Article 40 of the Directive;
   “comforter and carer” means an individual who (other than as part of their occupation) knowingly and willingly incurs an exposure to ionising radiation resulting from the support and comfort of another person who is undergoing or who has undergone any medical exposure;
   “contamination” means the unintended or undesirable presence of radioactive substances on surfaces or within solids, liquids or gases or on the human body, and “contaminated” has the related meaning
   “controlled area” means--
   (a) in the case of an area situated in Great Britain, an area which has been so designated in accordance with regulation 17(1); and
   (b) in the case of an area situated in Northern Ireland or in another member State, an area subject to special rules for the purposes of protection against ionising radiation and to which access is controlled as specified in Article 37 of the Directive;
Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom;

“dose” means, in relation to ionising radiation, any dose quantity or sum of dose quantities mentioned in Schedule 3;

“dose assessment” means the dose assessment made and recorded by an approved dosimetry service in accordance with regulation 22;

“dose constraint” means a constraint set on the prospective doses of individuals which may result from a given radiation source;

“dose limit” means, in relation to persons of a specified class, the limit on effective dose or equivalent dose specified in Schedule 3 in relation to a person of that class;

“dose rate” means, in relation to a place, the rate at which a person or part of a person would receive a dose of ionising radiation from external radiation if he were at that place being a dose rate at that place averaged over one minute;

“dose record” means, in relation to a person, the record of the doses received by that person as a result of his exposure to ionising radiation, being the record made and maintained on behalf of the employer by the approved dosimetry service in accordance with regulation 22;

“employment medical adviser” means an employment medical adviser appointed under section 56 of the 1974 Act;

“the Executive” means the Health and Safety Executive;

“external radiation” means, in relation to a person, ionising radiation coming from outside the body of that person;

“health record” means, in relation to an employee, the record of medical surveillance of that employee maintained by the employer in accordance with regulation 25(3);

“high-activity sealed source” means a sealed source for which the activity of the radionuclide is equal to or exceeds the relevant activity value set out in Part 4 of Schedule 7;

“internal radiation” means, in relation to a person, ionising radiation coming from inside the body of that person;

“ionising radiation” means the transfer of energy in the form of particles or electromagnetic waves of a wavelength of 100 nanometres or less or a frequency of 3 x 1015 hertz or more capable of producing ions directly or indirectly;

“licensee” has the meaning assigned to it by section 26(1) of the Nuclear Installations Act 1965;

“local rules” means rules made in accordance with regulation 18;

“maintained”, where the reference is to maintaining plant, apparatus, equipment or facilities, means maintained in an efficient state, in efficient working order and good repair;

“medical exposure” means exposure of a person to ionising radiation for the purpose of that person’s medical or dental examination or treatment which is conducted under the direction of a suitably qualified person and includes any such examination for legal purposes and any such examination or treatment conducted for the purposes of research;

“member State” means a member State of the European Union;

“non-classified outside worker” means a person who is not a classified person who carries out services in the supervised or controlled areas of any employer (other than the supervised or controlled areas of his own employer);

“nuclear premises” means premises which are or are on--

(a) a GB nuclear site (within the meaning given in section 68 of the Energy Act 2013);

(b) an authorised defence site (within the meaning given in regulation 2(1) of the Health and Safety (Enforcing Authority) Regulations 1998);

(c) a new nuclear build site (within the meaning given in regulation 2A of those Regulations); or
(d) a nuclear warship site (within the meaning given in regulation 2B of those Regulations);

“ONR” means the Office for Nuclear Regulation;

“outside worker” means both a classified outside worker and a non-classified outside worker;

“overexposure” means any exposure of a person to ionising radiation to the extent that the dose received by that person causes a dose limit relevant to that person to be exceeded or, in relation to regulation 27(2), causes a proportion of a dose limit relevant to any employee to be exceeded;

“practice” means work involving--

(a) the production, processing, handling, disposal, use, storage, holding or transport of radioactive substances; or

(b) the operation of any electrical equipment emitting ionising radiation and containing components operating at a potential difference of more than 5kv,

which can increase the exposure of individuals to radiation from a radiation source;

“radiation accident” means an accident where immediate action would be required to prevent or reduce the exposure to ionising radiation of employees or any other persons;

“radiation passbook” means--

(a) in the case of an outside worker employed by an employer in Great Britain--

(i) a passbook approved by the Executive for the purpose of these Regulations; or

(ii) a passbook to which paragraph 14 of Schedule 8 (transitional provisions) applies; and

(b) in the case of an outside worker employed by an employer in Northern Ireland or in another member State, a passbook authorised by the competent authority for Northern Ireland or that member State, as the case may be;

“radiation protection adviser” means an individual who, or a body which, meets such criteria of competence as may from time to time be specified in writing by the Executive;

“radiation source” means an entity that may cause exposure to ionising radiation, such as by emitting ionising radiation or by releasing radioactive substances;

“radioactive source” means a radiation source incorporating a radioactive substance (or substances) for the purpose of utilising the radioactivity of that substance (or substances);

“radioactive substance” means any substance which contains one or more radionuclides whose activity cannot be disregarded for the purposes of radiation protection;

“relevant authority” means--

(a) in so far as these Regulations apply in relation to, or in relation to any activity carried out on, any nuclear premises, the ONR;

(b) otherwise, the Executive.

“sealed source” means a source containing any radioactive substance whose structure is such as to prevent, under normal conditions of use, any dispersion of radioactive substances into the environment, but it does not include any radioactive substance inside a nuclear reactor or any nuclear fuel element;

“supervised area” means an area which has been so designated by the employer in accordance with regulation 17(3);

“trainee” means a person aged 16 years or over (including a student) who is undergoing instruction or training which involves operations which would, in the case of an employee, be work with ionising radiation;

“transport” means, in relation to a radioactive substance, carriage of that substance on a road within the meaning of, in relation to England and Wales, section 192 of the Road Traffic Act 1988 and, in relation to Scotland, the Roads (Scotland) Act 1984 or through another public place (whether on a conveyance or not), or by rail, inland waterway, sea or air and, in the case
of transport on a conveyance, a substance is deemed as being transported from the time that it is loaded onto the conveyance for the purpose of transporting it until it is unloaded from that conveyance, but a substance is not to be considered as being transported if--

(a) it is transported by means of a pipeline or similar means; or

(b) it forms an integral part of a conveyance and is used in connection with the operation of that conveyance;

“woman of reproductive capacity” means a woman who is made subject to the additional dose limit for a woman of reproductive capacity specified in paragraphs 5 and 11 of Schedule 3 by an entry in that woman’s health record made by an appointed doctor or employment medical adviser;

“work with ionising radiation” means work to which these Regulations apply by virtue of regulation 3(1).

(2) In these Regulations, unless the context otherwise requires, any reference to--

(a) an employer includes a reference to a self-employed person and any duty imposed by these Regulations on an employer in respect of that employer’s employee extends to a self-employed person in respect of themselves;

(b) an employee includes a reference to--

(i) a self-employed person, and

(ii) a trainee who but for the operation of this sub-paragraph and paragraph (3) would not be classed as an employee;

(c) exposure to ionising radiation is a reference to exposure to ionising radiation arising from work with ionising radiation;

(d) a person entering, remaining in or working in a controlled or supervised area includes a reference to any part of a person entering, remaining in or working in any such area.

(3) For the purposes of these Regulations and Part I of the 1974 Act--

(a) the word “work” is extended to include any instruction or training which a person undergoes as a trainee and the meaning of “at work” is extended accordingly; and

(b) a trainee, while undergoing instruction or training in respect of work with ionising radiation, is to be treated as the employee of the person whose undertaking (whether for profit or not) is providing that instruction or training and that person is to be treated as the employer of that trainee except that the duties to the trainee imposed upon the person providing instruction or training will only extend to matters under the control of that person.

(4) In these Regulations, where reference is made to a quantity specified in Schedule 7, that quantity is to be treated as being exceeded if--

(a) where only one radionuclide is involved, the quantity of that radionuclide exceeds the quantity specified in the appropriate entry in Schedule 7; or

(b) where more than one radionuclide is involved, the quantity ratio calculated in accordance with Part II of Schedule 7 exceeds one.

(5) Nothing in these Regulations is to be construed as preventing a person from entering or remaining in a controlled area or a supervised area where that person enters or remains in any such area--

(a) in the due exercise of a power of entry conferred on that person by or under any enactment; or

(b) for the purpose of undergoing a medical exposure.

(6) In these Regulations--
(a) any reference to an effective dose means the sum of the effective dose to the whole body from external radiation and the committed effective dose from internal radiation; and
(b) any reference to equivalent dose to a human tissue or organ includes the committed equivalent dose to that tissue or organ from internal radiation.

Application
—(3) Subject to the provisions of this regulation and to regulation 5(1), these Regulations apply to--

any practice;
any work (other than a practice) carried out in an atmosphere containing radon 222 gas at an annual average activity concentration in air exceeding 300 Bq m\(^{-3}\); and
any work (other than work referred to in sub-paragraphs (a) and (b)) with any radioactive substance containing naturally occurring radionuclides.

The following Regulations do not apply where the only work being undertaken is that referred to in paragraph (1)(b), namely regulations 24, 28 to 31, 33 and 34.

The following regulations do not apply in relation to persons undergoing medical exposures, namely regulations 8, 9, 12, 17 to 19, 24, 26, 32(1) and 35(1).

Regulation 11 shall not apply in relation to any comforter and carer.

In the case of an classified outside worker (working in a controlled area situated in Great Britain) employed by an employer established in Northern Ireland or in another member State, it is sufficient compliance with regulation 22 (dose assessment and recording) and regulation 25 (medical surveillance) if the employer complies with--

where the employer is established in Northern Ireland, regulations 21 and 24 of the Ionising Radiations Regulations (Northern Ireland) 2000; or
where the employer is established in another member State, the legislation in that State implementing the relevant parts of Chapter VII of the Directive where such legislation exists.

Duties under the Regulations
—(4) Any duty imposed by these Regulations on an employer in respect of the exposure to ionising radiation of persons other than that employer’s employees is imposed only in so far as the exposure of those persons to ionising radiation arises from work with ionising radiation undertaken by that employer.

Duties under these Regulations imposed upon the employer are also imposed upon any person who is—

the mine operator of a mine (within the meaning of regulation 3 of the Mines Regulations 2014); and
the operator of a quarry (within the meaning of the Quarries Regulations 1999), in so far as those duties relate to the mine or part of the mine of which that person is the mine operator or the quarry of which that person is the operator and to matters within that person’s control.

Subject to regulation 5(1)(b), duties under these Regulations imposed upon the employer are imposed on the holder of a nuclear site licence under the Nuclear Installations Act 1965 in so far as those duties relate to the licensed site.

In this regulation—
“mine operator” has the meaning given by regulation 2(1) of the Mines Regulations 2014;
“operator” has the meaning given by regulation 2(1) of the Quarries Regulations 1999.
PART 2
GENERAL PRINCIPLES AND PROCEDURES

Notification of specified work

—(5) This regulation applies to work with ionising radiation except--

work specified in Schedule 1;

work carried on at a site licensed under section 1 of the Nuclear Installations Act 1965;

work arising from the carrying out of a registrable practice under regulation 6 or a licensable practice under regulation 7.

Subject to paragraphs (7) and (8) and to paragraph 9 of Schedule 8 (which relates to transitional provisions), an employer must not for the first time since the coming into force of this regulation carry out work with ionising radiation to which this regulation applies unless before commencing that work the employer has notified the appropriate authority of its intention to carry out that work and has provided the appropriate authority with such particulars relating to the work as the Executive may specify from time to time.

Where an employer has notified work in accordance with paragraph (2), the appropriate authority may, by notice in writing require that employer to provide such additional particulars of that work as it may reasonably require, and in such a case the employer must provide those particulars by such time as is specified in the notice or by such other time as the appropriate authority may subsequently agree.

A notice under paragraph (3) may require the employer to notify the appropriate authority of any of those additional particulars before each occasion on which the employer commences work with ionising radiation.

Where an employer has notified work in accordance with paragraph (2) and subsequently makes a material change in that work which would affect the particulars so notified, the employer must immediately notify the appropriate authority of that change.

Nothing in paragraph (5) is to be taken as requiring the cessation of the work to be notified in accordance with that paragraph except where the site or any part of the site in which the work was carried on has been or is to be vacated.

Where the only work being undertaken is work referred to in regulation 3(1)(b) or (c), it is sufficient compliance with paragraph (2) if the employer having control of the premises where the work is carried on makes the notification required by that paragraph as soon as practicable after the work has commenced.

In this regulation “appropriate authority” means—

in relation to practices carried out exclusively or primarily on premises which are or are on--

an authorised defence site;

a new nuclear build site;

a nuclear warship site,

the ONR;

otherwise, the Executive.

Registration of specified practices

—(6) The meaning set out in paragraph (2) applies for the purposes of this regulation.

A “registrable practice” means a practice which is not a licensable practice (as defined in regulation 7) and which involves the operation of a radiation generator or a radioactive source.

An employer is permitted to carry out a registrable practice provided that--
the employer completes a registration process in the manner specified by the appropriate authority from time to time;
the employer provides to the appropriate authority any such additional particulars in relation to the practice requested by the appropriate authority as the appropriate authority may reasonably require for the purposes of registration;
the practice is or is to be carried out in accordance with such conditions (which may include a limit of time) as the appropriate authority may approve from time to time.

The operation of a radioactive source is not a registrable practice if the activity concentration value of that source does not exceed the activity concentration value specified in column 4 of Part I of Schedule 7.

Where a practice is registered pursuant to paragraph (3) and subsequently there occurs a material change to the circumstances relating to that practice, the employer responsible for that practice must immediately notify the appropriate authority of that change.

In this regulation “appropriate authority” means—
in relation to practices carried out exclusively or primarily on nuclear premises, the ONR;
otherwise, the Executive.

Licensing of specified practices

—(7) The meaning set out in paragraph (2) applies for the purposes of this regulation.
A “licensable practice” means the occupational elements of any of the following practices—

- the deliberate administration of radioactive substances to persons and, in so far as the radiation protection of human beings is concerned, animals for the purpose of medical or veterinary diagnosis, treatment or research;
- the deliberate addition of radioactive substances in the production or manufacture of consumer products or other product, including medicinal products, and the import of such products;
- the operation of an accelerator (except an electron microscope);
- industrial radiography;
- industrial irradiation;
- any practice involving a high-activity sealed source (other than one within paragraph (e) or (f) above);
- the operation, decommissioning and closure of any facility for the long term storage or disposal of radioactive substances, including facilities managing radioactive substances for this purpose;
- practices discharging significant amounts of radioactive substances with airborne or liquid effluent into the environment.

An employer is permitted to carry out a licensable practice provided that the employer is granted a licence for the practice by the appropriate authority.
A licence granted for a practice involving a high-activity sealed source must include information regarding—
- responsibilities;
- minimum staff competencies, including information and training;
- minimum performance criteria for the high-activity sealed source, its container and any additional equipment;
- requirements for emergency procedures and communication links;
- work procedures that must be followed;
maintenance of equipment, high-activity sealed sources and containers;
adequate management of disused high-activity sealed sources, including agreements regarding the transfer, if appropriate, of such sources to a manufacturer, supplier, another licensed employer or a waste disposal or storage facility.

A licence granted under paragraph (3) may be granted subject to conditions and with or without limit of time and may be revoked in writing at any time.

An employer applying for a licence under paragraph (3) must provide—
such information as is specified by the appropriate authority from time to time having regard to the list of information in Schedule 2;
any additional information requested by the appropriate authority in writing which the appropriate authority may reasonably require for the purposes of considering the licence application.

An employer who is aggrieved by—
a decision of the appropriate authority—
refusing to grant a licence under paragraph (3);
imposing a limit of time upon a licence granted under paragraph (3); or
revoking a licence under paragraph (5); or
the terms of any conditions attached to a licence by the appropriate authority under paragraph (5),
may appeal to the Secretary of State.

Sub-sections (2) to (6) of section 44 of the 1974 Act apply for the purposes of paragraph (7) as they apply to an appeal under section 44(1) of that Act.

The Health and Safety Licensing Appeals (Hearings Procedure) Rules 1974, as respects England and Wales, and the Health and Safety Licensing Appeals (Hearings Procedure) (Scotland) Rules 1974, as respects Scotland, apply to an appeal under paragraph (7) as they apply to an appeal under sub-section (1) of section 44 of the 1974 Act, but with the modification that references to a licensing authority are to be read as references to the appropriate authority.

In this regulation “appropriate authority” has the meaning given in regulation 6(6).

Prior risk assessment etc

—(8) An employer, before commencing a new activity involving work with ionising radiation in respect of which no risk assessment has been made by that employer, must make a suitable and sufficient assessment of the risk to any employee and other person for the purpose of identifying the measures the employer needs to take to restrict the exposure of that employee or other person to ionising radiation.

Without prejudice to paragraph (1), an employer must not carry out work with ionising radiation unless it has made an assessment sufficient to demonstrate that--
all hazards with the potential to cause a radiation accident have been identified; and
the nature and magnitude of the risks to employees and other persons arising from those hazards have been evaluated.

Where the assessment made for the purposes of this regulation shows that a radiation risk to employees or other persons exists from an identifiable radiation accident, the employer who made the assessment must take all reasonably practicable steps to--
prevent any such accident;
limit the consequences of any such accident which does occur; and
provide employees with the information, instruction and training, and with the equipment necessary, to restrict their exposure to ionising radiation.
The requirements of this regulation are without prejudice to the requirements of regulation 3 (Risk assessment) of the Management of Health and Safety at Work Regulations 1999.

Restriction of exposure

—(9) Every employer must, in relation to any work with ionising radiation that it undertakes, take all necessary steps to restrict so far as is reasonably practicable the extent to which its employees and other persons are exposed to ionising radiation.

Without prejudice to the generality of paragraph (1), an employer in relation to any work with ionising radiation that it undertakes must—

so far as is reasonably practicable achieve the restriction of exposure to ionising radiation required under paragraph (1) by means of engineering controls and design features and in addition by the provision and use of safety features and warning devices; and

in addition to sub-paragraph (a), provide such systems of work as will, so far as is reasonably practicable, restrict the exposure to ionising radiation of employees and other persons; and

in addition to sub-paragraphs (a) and (b), where it is reasonably practicable to further restrict exposure to ionising radiation by means of personal protective equipment, provide employees or other persons with adequate and suitable personal protective equipment (including respiratory protective equipment) unless the use of personal protective equipment of a particular kind is not appropriate having regard to the nature of the work or the circumstances of the particular case.

Where it is appropriate to do so at the planning stage of radiation protection, an employer, in relation to any work with ionising radiation that it undertakes, must use dose constraints in restricting exposure to ionising radiation pursuant to paragraph (1).

Such dose constraints must be established by the employer in terms of individual effective or equivalent doses over a defined appropriate time period.

An employer who provides any system of work or personal protective equipment pursuant to this regulation must take all reasonable steps to ensure that it is properly used or applied as the case may be.

Without prejudice to paragraph (1), an employer who undertakes work with ionising radiation must ensure, that—

in relation to an employee who is pregnant, the conditions of exposure are such that, after the employee’s employer has been notified of the pregnancy, the equivalent dose to the foetus is as low as is reasonably practicable and is unlikely to exceed 1 mSv during at least the remainder of the pregnancy; and

in relation to an employee who is breastfeeding, that employee must not be engaged in any work involving a significant risk of intake of radionuclides or of bodily contamination.

Nothing in paragraph (6) requires an employer to take any action in relation to an employee until that employee’s employer has been notified by the employee that that employee is pregnant or breastfeeding and the employer to whom paragraph (6) relates has been made aware, or should reasonably have been expected to be aware, of that fact.

Every employer must, for the purpose of determining whether the requirements of paragraph (1) are being met, ensure that an investigation is carried out without delay when the effective dose of ionising radiation received by any of its employees for the first time in any calendar year exceeds 15 mSv or such other lower effective dose as the employer may specify, which dose must be specified in writing in local rules made pursuant to regulation 18(1) or, where local rules are not required, by other suitable means.
**Personal protective equipment**

—(10) Any personal protective equipment provided by an employer pursuant to regulation 9 must—

comply with any provision of the Personal Protective Equipment Regulations 2002 which is applicable to that item of personal protective equipment; or

in the case of respiratory protective equipment, where no provision referred to in sub-
paragraph (a) applies, conform to any relevant guidance on respiratory protective
equipment issued by the Executive.

Every employer who provides personal protective equipment pursuant to regulation 9 must ensure that adequate facilities are provided for the storage of that equipment.

**Maintenance and examination of engineering controls etc and personal protective equipment**

—(11) An employer who provides any engineering control, design feature, safety feature or warning device to meet the requirements of regulation 9(2)(a) must ensure—

that any such control, feature or device is properly maintained; and

where appropriate, that thorough examinations and tests of such controls, features or devices are carried out at suitable intervals.

Every employer must ensure that all personal protective equipment provided pursuant to regulation 9 is, where appropriate, thoroughly examined at suitable intervals and is properly maintained and that, in the case of respiratory protective equipment, a suitable record of that examination is made and kept for at least two years from the date on which the examination was made and that the record includes a statement of the condition of the equipment at the time of the examination.

**Dose limitation**

—(12) Subject to paragraph (2) and to paragraph 5 of Schedule 3, every employer must ensure that its employees and other persons within a class specified in Schedule 3 are not exposed to ionising radiation to an extent that any dose limit specified in Part I of that Schedule for such class of person is exceeded in any calendar year.

Where an employer is able to demonstrate to the appropriate authority that, in respect of an employee, the dose limit specified in paragraph 1 of Part I of Schedule 3 is impracticable having regard to the nature of the work undertaken by that employee, the appropriate authority may in respect of that employee authorise the employer to apply the dose limits set out in paragraphs 9 to 11 of Schedule 3 and in such case the provisions of Part II of that Schedule will have effect.

For the assessment of compliance with the dose limits relating to members of the public, every employer who carries out work with ionising radiation must make realistic estimates of the average effective dose (and where relevant equivalent dose) to representative members of the appropriate reference group for the expected pathways of exposure.

In this regulation, “appropriate authority” means—

in relation to practices carried out exclusively or primarily on nuclear premises, the ONR;

otherwise, the Executive.

**Contingency plans**

—(13) Where an assessment made in accordance with regulation 8 shows that a radiation accident is reasonably foreseeable (having regard to the steps taken by the employer under paragraph (3) of that regulation), the employer must prepare a contingency plan designed to secure, so far as is reasonably practicable, the restriction of exposure to ionising radiation and the health and safety of persons who may be affected by such accident.

An employer must ensure that—
where local rules are required for the purposes of regulation 18, a copy of the contingency plan made in pursuance of paragraph (1) is identified in those rules and incorporated into them by way of summary or reference;

any employee under the employer’s control who may be involved with or may be affected by arrangements in the plan has been given suitable and sufficient instructions and where appropriate issued with suitable dose meters or other devices obtained in either case from an approved dosimetry service;

where appropriate, rehearsals of the arrangements in the plan are carried out at suitable intervals; and

if circumstances arise where it is necessary for some or all of the arrangements in the plan to be carried out:

the cause of those circumstances is analysed to determine, so far as is reasonably practicable, the measures, if any, required to prevent a recurrence of such circumstances;

a record of such analysis is made and kept for at least 2 years from the date on which it was made; and,

any accidental exposure which occurs due to the above circumstances is noted on any relevant dose record.

PART 3
ARRANGEMENTS FOR THE MANAGEMENT OF RADIATION PROTECTION

Radiation protection adviser

—(14) Subject to paragraph (3), every employer that is engaged in work with ionising radiation must consult such suitable radiation protection advisers as are necessary for the purpose of advising the employer as to the observance of these Regulations and must, in any event, consult one or more suitable radiation protection advisers with regard to those matters which are set out in Schedule 4.

Where an employer consults a radiation protection adviser pursuant to the requirements of paragraph (1) (other than in respect of the observance of that paragraph), the employer must appoint that radiation protection adviser in writing and must include in that appointment the scope of the advice which the radiation protection adviser is required to give.

Nothing in paragraph (1) requires an employer to consult a radiation protection adviser where the only work with ionising radiation undertaken by that employer is work specified in Schedule 1.

The employer must provide any radiation protection adviser appointed by it with adequate information and facilities for the performance of the radiation protection adviser’s functions.

Information, instruction and training

—(15) Every employer must ensure that--

those of its employees who are engaged in work with ionising radiation are given appropriate training in the field of radiation protection and receive such information and instruction as is suitable and sufficient for them to know—

the risks to health created by exposure to ionising radiation;

the general radiation protection procedures and precautions which should be taken and the specific radiation protection procedures and precautions in connection with the operational and working conditions of the work with ionising radiation to which they may be assigned; and
the importance of complying with the medical, technical and administrative requirements of these Regulations;
adequate information is given to other persons who are directly concerned with the work with ionising radiation carried on by the employer to ensure their health and safety so far as is reasonably practicable; and
those female employees of that employer who are engaged in work with ionising radiation are informed of the possible risk arising from ionising radiation to the foetus and to a nursing infant and of the importance of those employees informing the employer in writing as soon as possible--

if they intend to breast feed an infant;

any employees or outside workers engaged in work in a controlled area (as designated under regulation 17) are given specific training in connection with the characteristics of the workplace and the activities within it.

the giving of training and information under this regulation is repeated at appropriate intervals and documented by the employer.

In addition to the requirements in paragraph (1), employers engaged in work with ionising radiation involving a high-activity sealed source must ensure that the information and training given to employees includes:

specific requirements for the safe management and control of high-activity sealed sources for the purpose of preparing such employees for any events which may affect their radiation protection;

particular emphasis on the necessary safety requirements in connection with high-activity sealed sources;

specific information on the possible consequences of the loss of adequate control of high-activity sealed sources.

Co-operation between employers and others

—(16) Where work with ionising radiation undertaken by one employer is likely to give rise to the exposure to ionising radiation of the employee of another employer, the employers concerned must co-operate by the exchange of information or otherwise to the extent necessary to ensure that each such employer—

has access to information on the possible exposure of their employees to ionising radiation, and

is enabled to comply with the requirements of these Regulations in so far as their ability to comply depends upon such co-operation.

The persons and bodies listed in paragraph (3) must co-operate with each other as appropriate regarding the exchange of all relevant information on the doses received by an employee in connection with—

the medical examination prior to employment or classification of the employee pursuant to regulation 25, and

the control of further exposure of employees to ionising radiation.

The persons and bodies referred to in paragraph (2) are—

the employer of the employee in respect of whom the information relates;
the Executive;
occupational health services;
radiation protection advisers;
dosimetry services.
PART 4

Designated Areas

Designation of controlled or supervised areas

—(17) Every employer must designate as a controlled area any area under its control which has been identified by an assessment made by that employer (whether pursuant to regulation 8 or otherwise) as an area in which:

it is necessary for any person who enters or works in the area to follow special procedures designed to restrict significant exposure to ionising radiation in that area or prevent or limit the probability and magnitude of radiation accidents or their effects; or

any person working in the area is likely to receive an effective dose greater than 6 mSv a year or an equivalent dose greater than 15mSv a year for the lens of the eye or 150 mSv a year for the skin and the hands, forearms, feet and ankles.

An employer must not intentionally create in any area conditions which would require that area to be designated as a controlled area unless that area is for the time being under the control of that employer.

An employer must designate as a supervised area any area under its control, not being an area designated as a controlled area:

where it is necessary to keep the conditions of the area under review to determine whether the area should be designated as a controlled area; or

in which any person is likely to receive an effective dose greater than 1 mSv a year or an equivalent dose greater than 5mSv a year for the lens of the eye or 50 mSv a year for the skin and the hands, forearms, feet and ankles.

Local rules and radiation protection supervisors

—(18) For the purposes of enabling work with ionising radiation to be carried on in accordance with the requirements of these Regulations, every employer that is engaged in work with ionising radiation must, in respect of any controlled area or, where appropriate having regard to the nature of the work carried out there, any supervised area, make and set down in writing such local rules as are appropriate to the radiation risk and the nature of the operations undertaken in that area.

Local rules must identify the main working instructions intended to restrict any exposure in that controlled or supervised area.

An employer must take all reasonable steps to ensure that any local rules made pursuant to paragraph (1) and which are relevant to the work being carried out are observed.

An employer must ensure that such of those rules made pursuant to paragraph (1) as are relevant are brought to the attention of those employees and other persons who may be affected by them.

An employer must—

appoint one or more suitable radiation protection supervisors for the purpose of securing compliance with these Regulations in respect of work carried out in any area made subject to local rules pursuant to paragraph (1);

set down in the local rules the names of such individuals so appointed; and

provide the means necessary for the radiation protection supervisor to perform their role.
Additional requirements for designated areas

—(19) Every employer who designates any area as a controlled or supervised area must ensure that any such designated area is adequately described in local rules and that—

in the case of any controlled area—

the area is physically demarcated or, where this is not reasonably practicable, delineated by some other suitable means; and

suitable and sufficient signs are displayed in suitable positions indicating that the area is a controlled area, the nature of the radiation sources in that area and the risks arising from such sources; and

in the case of any supervised area, suitable and sufficient signs giving warning of the supervised area are displayed, where appropriate, in suitable positions indicating the nature of the radiation sources and the risks arising from such sources.

The employer who has designated an area as a controlled area must not permit any employee or other person to enter or remain in such an area unless that employee or other person—

being a person other than a classified outside worker, is a classified person;

being a classified outside worker, is a person in respect of whom the employer who has so designated an area as a controlled area has taken all reasonable steps to ensure that the person—

is subject to individual dose assessment pursuant to regulation 22;

has been provided with and has been trained to use any personal protective equipment that may be necessary pursuant to regulation 9(2)(c);

has received any specific training required pursuant to regulation 15; and

has been certified fit for the work with ionising radiation which the person is to carry out pursuant to regulation 25; or

not being a classified person, enters or remains in the area in accordance with suitable written arrangements for the purpose of ensuring that—

in the case of an employee or an non-classified outside worker aged 18 years or over, that person does not receive in any calendar year a cumulative dose of ionising radiation which would require that person to be designated as a classified person; or

in the case of any other person, he does not receive in any calendar year a dose of ionising radiation exceeding any relevant dose limit.

A non-classified outside worker is not permitted to enter or remain in a controlled area pursuant to paragraph 2(c)(i) unless paragraphs 2(b)(ii) (personal protective equipment) and 2(b)(iii) (specific training) have been observed in relation to that non-classified outside worker.

An employer who has designated an area as a controlled area must not permit a person to enter or remain in such area in accordance with the written arrangements under paragraph (2)(c), unless he can demonstrate, by personal dose monitoring or other suitable measurements, that the doses are restricted in accordance with that sub-paragraph.

An employer who has designated an area as a controlled area must, in relation to a classified outside worker, ensure that—

the classified outside worker is subject to arrangements for estimating the dose of ionising radiation received by that worker whilst in the controlled area;
as soon as is reasonably practicable after the services carried out by that classified outside worker in that controlled area are completed, an estimate of the dose received by that worker is entered into that worker's radiation passbook; and
when the radiation passbook of the classified outside worker is in the possession of that employer, the passbook is made available to that worker upon request.

The employer who carries out the monitoring or measurements pursuant to paragraph (4) must keep the results of the monitoring or measurements referred to in that paragraph for a period of two years from the date they were recorded and must, at the request of the person to whom the monitoring or measurements relate and on reasonable notice being given make the results available to that person.

In any case where there is a significant risk of the spread of radioactive contamination from a controlled area, the employer who has designated that area as a controlled area must make adequate arrangements to restrict, so far as is reasonably practicable, the spread of such contamination.

Without prejudice to the generality of paragraph (7), the arrangements required by that paragraph must, where appropriate, include--

the provision of suitable and sufficient washing and changing facilities for persons who enter or leave any controlled or supervised area;

the proper maintenance of such washing and changing facilities;

the prohibition of eating, drinking or smoking or similar activity likely to result in the ingestion, inhalation or absorption of a radioactive substance by any employee or outside worker in a controlled area; and

the means for monitoring contamination —

on any person, article or goods leaving a controlled area;

within the controlled area and, where appropriate, in the adjacent area.

Monitoring of designated areas

—(20) Every employer who designates an area as a controlled or supervised area must take such steps as are necessary (otherwise than by use of assessed doses of individuals), having regard to the nature and extent of the risks resulting from exposure to ionising radiation, to ensure that levels of ionising radiation are adequately monitored for each such area and that working conditions in those areas are kept under review.

In relation to areas designated on the basis of—

external radiation, adequate monitoring must include measurement of dose rates (averaged over a suitable period if necessary);

internal radiation, adequate monitoring must include measurements of air activity and surface contamination where appropriate, taking into account the physical and chemical states of the radioactive contamination;

The employer upon whom a duty is imposed by paragraph (1) must provide suitable and sufficient equipment for carrying out the monitoring required by that paragraph, which equipment must--

be properly maintained so that it remains fit for the purpose for which it was intended; and
be adequately tested and examined at appropriate intervals.

Equipment provided pursuant to paragraph (3) will not be or remain suitable unless--

the performance of the equipment has been established by adequate tests before it has first been used; and
the tests and examinations carried out pursuant to paragraph (3) and sub-paragraph (a) have been carried out by or under the supervision of a qualified person.

The employer upon whom a duty is imposed by paragraph (1) must—
make suitable records of the results of the monitoring carried out in accordance with paragraph (1) and of the tests carried out in accordance with paragraphs (3) and (4);
ensure that the records of the tests carried out pursuant to sub-paragraph (a) above are authorised by a qualified person; and
keep the records referred to in sub-paragraph (a), or copies of those records, for at least 2 years from the respective dates on which they were made.

For areas designated on the basis of—
external radiation, suitable records must include an indication of the nature and quality of the radiation in question;

internal radiation, suitable records must include, where appropriate, and indication of the nature and physical and chemical states of the radioactive contamination.

PART 5

Classification and Monitoring of Persons

Designation of classified persons

—(21) Subject to paragraph (2), the employer must designate as classified persons those of its employees who are likely to receive an effective dose in excess of 6 mSv per year or an equivalent dose which exceeds **15 mSv per year for the lens of the eye or 150 mSv per year for the skin and the hands, forearms, feet and ankles** and must immediately inform those employees that they have been so designated.

The employer must not designate an employee as a classified person unless—
that employee is aged 18 years or over; and
an appointed doctor or employment medical adviser has certified in the health record that that employee is fit for the work with ionising radiation which that employee is to carry out.

The employer may cease to treat an employee as a classified person only at the end of a calendar year except where--
an appointed doctor or employment medical adviser so requires; or
the employee is no longer employed by the same employer in a capacity which is likely to result in significant exposure to ionising radiation during the remainder of the relevant calendar year.

Dose assessment and recording

—(22) Every employer must ensure that--
in respect of each of its employees who is designated as a classified person, an assessment is made of all doses of ionising radiation received by such employee which are likely to be significant; and
such assessments are recorded.
For the purposes of paragraph (1), the employer must make suitable arrangements with one or more approved dosimetry service for—

the making of systematic assessments of such doses by the use of suitable individual measurement for appropriate periods or, where individual measurement is inappropriate, by means of other suitable measurements; and

the making and maintenance of dose records relating to each classified person.

For the purposes of paragraph (2)(b), the arrangements that the employer makes with the approved dosimetry service must include requirements for that service—

to keep the records made and maintained pursuant to the arrangements, or a copy of those records, until the person to whom the record relates has or would have attained the age of 75 years but in any event for at least 30 years from when they were made;

to provide the employer at appropriate intervals with suitable summaries of the dose records maintained in accordance with sub-paragraph (a);

when required by the employer, to provide the employer with such copies of the dose record relating to any of its employees as the employer may require;

when required by the employer, to make a record of the information concerning the dose assessment relating to a classified person who ceases to be an employee of the employer, and to send that record to the Executive and a copy of the record to the employer as soon as possible, and a record so made is referred to in this regulation as a “termination record”;

within 3 months, or such longer period as the Executive may agree, of the end of each calendar year to send to the Executive summaries of all current dose records relating to that year;

when required by the relevant authority, to provide it with copies of any dose records;

where a dose is estimated pursuant to regulation 23, to make an entry in a dose record and retain the summary of the information used to estimate that dose;

where the employer employs a classified outside worker, to provide, where appropriate, a current radiation passbook in respect of that classified outside worker; and

where the employer employs a classified outside worker who works in Northern Ireland or another member State, to maintain a continuing record of the assessment of the dose received by that classified outside worker when working in such place.

The employer must provide the approved dosimetry service with such information concerning its employees as is necessary for the approved dosimetry service to comply with the arrangements made for the purposes of paragraph (2).

An employer must—

ensure that each classified outside worker employed by it is provided with a current individual radiation passbook which must not be transferable to any other worker and in which must be entered the particulars set out in Schedule 5; and

make suitable arrangements to ensure that the particulars entered in the radiation passbook are kept up-to-date during the continuance of the employment of the classified outside worker by that employer.

The employer must—

at the request of a classified person employed by the employer (or of a person formerly employed by the employer as a classified person) and on reasonable notice being given, obtain (where necessary) from the approved dosimetry service and make available to that person—

a copy of the dose summary provided for the purpose of paragraph (3)(b) relating to that person and made within a period of 2 years preceding the request; and
a copy of the dose record of that person; and

when a classified person ceases to be employed by the employer, take all reasonable steps to provide to that person a copy of his termination record.

The employer must keep a copy of the summary of the dose record received from the approved dosimetry service for at least 2 years from the end of the calendar year to which the summary relates.

Estimated doses and special entries

—(23) Where a dosemeter or other device is used to make any individual measurement under regulation 22(2) and that dosemeter or device is lost, damaged or destroyed or it is not practicable to assess the dose received by a classified person over any period, the employer must make an adequate investigation of the circumstances of the case with a view to estimating the dose received by that person during that period and either--

in a case where there is adequate information to estimate the dose received by that person, must send to the approved dosimetry service an adequate summary of the information used to estimate that dose and must arrange for the approved dosimetry service to enter the estimated dose in the dose record of that person; or

in a case where there is inadequate information to estimate the dose received by the classified person, must arrange for the approved dosimetry service to enter a notional dose in the dose record of that person which must be the proportion of the total annual dose limit for the relevant period,

and in either case the employer must take reasonable steps to inform the classified person of that entry and arrange for the approved dosimetry service to identify the entry in the dose record as an estimated dose or a notional dose as the case may be.

The employer must, at the request of the classified person (or a person formerly employed by that employer as a classified person) to whom the investigation made under paragraph (1) relates and on reasonable notice being given, make available to that person a copy of the summary sent to the approved dosimetry service under sub-paragraph (a) of paragraph (1).

Subject to paragraphs (5) and (8), where an employer has reasonable cause to believe that the dose received by a classified person is much greater or much less than that shown in the relevant entry of the dose record, the employer must make an adequate investigation of the circumstances of the exposure of that person to ionising radiation and, if that investigation confirms the employer’s belief, the employer must, where there is adequate information to estimate the dose received by the employee--

send to the approved dosimetry service an adequate summary of the information used to estimate that dose;

arrange for the approved dosimetry service to enter that estimated dose in the dose record of that person and for the approved dosimetry service to identify the estimated dose in the dose record as a special entry; and

notify the classified person accordingly.

The employer must make a report of any investigation carried out under paragraph (3) and must preserve a copy of that report for a period of 2 years from the date it was made.

Paragraph (3) does not apply--

in respect of a classified person subject only to an annual dose limit, more than 12 months after the original entry was made in the record; and

in any other case, more than 5 years after the original entry was made in the record.
Where a classified person is aggrieved by a decision to replace a recorded dose by an estimated dose pursuant to paragraph (3) that person may, by an application in writing to the appropriate authority made within 3 months of the date on which that person was notified of the decision, apply for that decision to be reviewed.

Where the appropriate authority concludes (whether as a result of a review carried out pursuant to paragraph (6) or otherwise) that--

there is reasonable cause to believe the investigation carried out pursuant to paragraph (3) was inadequate; or

a reasonable estimated dose has not been established,

the employer must, if so directed by the appropriate authority, re-instate the original entry in the dose record.

The employer must not, without the consent of the appropriate authority, require the approved dosimetry service to enter an estimated dose in the dose record in any case where--

the cumulative recorded effective dose is 20 mSv or more in one calendar year; or

the cumulative recorded equivalent dose for the calendar year exceeds a relevant dose limit.

In this regulation “appropriate authority” means--

in relation to a classified person employed wholly or mainly on nuclear premises, the ONR; otherwise, the Executive.

Dosimetry for accidents etc [fr23][42]

—(24) Where any accident or other occurrence takes place which is likely to result in a person receiving an effective dose of ionising radiation exceeding 6 mSv or an equivalent dose greater than 15 mSv for the lens of an eye or 150 mSv for the skin and the hands, forearms, feet and ankles, the employer must—

in the case of a classified person, arrange for a dose assessment to be made by the approved dosimetry service as soon as possible;

in the case of an employee to whom a dosemeter or other device has been issued in accordance with regulation 13(2), arrange for that dosemeter or device to be examined and for the dose received to be assessed by the approved dosimetry service as soon as possible;

in any other case, arrange for the dose to be assessed by an appropriate means as soon as possible, having regard to the advice of the radiation protection adviser.

In such a case, the employer must--

take all reasonably practicable steps to inform each person for whom a dose assessment has been made of the result of that assessment; and

keep a record of the assessment or a copy thereof until the person to whom the record relates has or would have attained the age of 75 years but in any event for at least 30 years from the date of the relevant accident.

Medical surveillance

—(25) This regulation applies in relation to--

classified persons and persons whom an employer intends to designate as classified persons;

employees who have received an overexposure and are not classified persons;
The employer must ensure that each of its employees to whom this regulation relates is under adequate medical surveillance by an appointed doctor or employment medical adviser for the purpose of determining the fitness of each employee for the work with ionising radiation which that employee is to carry out.

**Adequate medical surveillance must include—**

- A medical examination before first being designated as a classified person in a post involving work with ionising radiation;
- Periodic reviews of health at least once a year;
- Special medical surveillance of an employee when a relevant dose limit has been exceeded;
- A determination of whether any specific conditions are necessary; and
- A review of health after cessation of work where this is necessary to safeguard the health of the employee.

The nature of the medical surveillance for each employee must take account of the nature of their work with ionising radiation and their state of health.

The employer must ensure that a health record, containing the particulars referred to in Schedule 6, in respect of each of its employees to whom this regulation relates is made and maintained and that that record or a copy of the record is kept until the person to whom the record relates has or would have attained the age of 75 years but in any event for at least 30 years from the date of the last entry made in it.

Subject to paragraph (7), the employer must ensure that there is a valid entry in the health record of each of its employees to whom this regulation relates (other than employees who have received an overexposure and who are not classified persons) made by an appointed doctor or employment medical adviser and an entry in the health record must be valid—

- for 12 months from the date it was made or treated as made by virtue of paragraph (7);
- for such shorter period as is specified in the entry by the appointed doctor or employment medical adviser; or
- until cancelled by an appointed doctor or employment medical adviser by a further entry in the record.

For the purposes of paragraph (6)(a), a further entry in the health record of the same employee, where made not less than 11 months nor more than 13 months after the start of the current period of validity, is to be treated as if made at the end of that period.

Where the appointed doctor or employment medical adviser has certified in the health record of an employee to whom this regulation relates that in his professional opinion that employee should not be engaged in work with ionising radiation or that the employee should only be so engaged under conditions specified by the appointed doctor or employment medical adviser in the health record, the employer must not permit that employee to be engaged in the work with ionising radiation except in accordance with the conditions, if any, so specified.

Where an appointed doctor or employment medical adviser, for the purpose of carrying out their functions under these Regulations, requires to inspect any workplace the employer must permit them to do so.

The employer must make available to the appointed doctor or employment medical adviser the summary of the dose record kept by the employer pursuant to regulation 22(7) and such other records kept for the purposes of these Regulations as the appointed doctor or employment medical adviser may reasonably require.

Where an employee is aggrieved by a decision recorded in the health record by an appointed doctor or employment medical adviser the employee may, by an application in writing to the
Executive made within [28 days] of the date on which the employee was notified of the decision, apply for that decision to be reviewed in accordance with a procedure approved for the purposes of this paragraph by the Executive, and the result of that review must be notified to the employee and entered in his health record in accordance with the approved procedure.

Investigation and notification of overexposure

—(26) Where an employer suspects or has been informed that any person is likely to have received an overexposure as a result of work with ionising radiation carried out by that employer, that employer must make an immediate investigation to determine whether there are circumstances which show beyond reasonable doubt that no overexposure could have occurred and, unless this is shown, the employer must--

as soon as practicable notify the suspected overexposure to--
the appropriate authority;
in the case of an employee of some other employer, that other employer; and
in the case of the employer’s own employee, the appointed doctor or employment medical adviser;
as soon as practicable take reasonable steps to notify the suspected overexposure to the person affected; and
make or arrange for such investigation of the circumstances of the exposure and an assessment of any relevant dose received as is necessary to determine, so far as is reasonably practicable, the measures, if any, required to be taken to prevent a recurrence of such overexposure and must immediately notify the results of that investigation and assessment to the persons and authorities mentioned in sub-paragraph (a) and must--
in the case of the employer’s employee, immediately notify that employee of the results of the investigation and assessment, or
in the case of a person who is not the employer’s employee, where the investigation has shown that that person has received an overexposure, take all reasonable steps to notify that person of their overexposure.

An employer who makes any investigation pursuant to paragraph (1) must make a report of that investigation and must--
in respect of an immediate investigation, keep that report or a copy of the report for at least 2 years from the date on which it was made; and
in respect of an investigation made pursuant to sub-paragraph (c) of paragraph (1), keep that report or a copy of the report until the person to whom the record relates has or would have attained the age of 75 years but in any event for at least 30 years from the date on which it was made.

Where the person who received the overexposure is an employee who has a dose record, the employee’s employer must arrange for the assessment of the dose received to be entered into that dose record.

In this regulation “appropriate authority” means--
in relation to overexposure as a result of work carried out on nuclear premises, the ONR;
otherwise, the Executive.

Dose limitation for overexposed employees
Without prejudice to other requirements of these Regulations and in particular regulation 25(6), where an employee has been subjected to an overexposure paragraph (2) applies in relation to the employment of that employee on work with ionising radiation during the remainder of the dose limitation period commencing at the end of the personal dose assessment period in which that employee was subjected to the overexposure.

The employer must ensure that an employee to whom this regulation relates does not, during the remainder of the dose limitation period, receive a dose of ionising radiation greater than that proportion of any dose limit which is equal to the proportion that the remaining part of the dose limitation period bears to the whole of that period.

The employer must inform an employee who has been subjected to an overexposure of the dose limit which is applicable to that employee for the remainder of the relevant dose limitation period.

In this regulation, “dose limitation period” means, as appropriate, a calendar year or the period of five consecutive calendar years.

PART 6

Arrangements for the Control of Radioactive Substances, Articles and Equipment

Sealed sources and articles containing or embodying radioactive substances

Where a radioactive substance is used as a source of ionising radiation in work with ionising radiation, the employer must ensure that, whenever reasonably practicable, the substance is in the form of a sealed source.

The employer must ensure that the design, construction and maintenance of any article containing or embodying a radioactive substance, including its bonding, immediate container or other mechanical protection, is such as to prevent the leakage of any radioactive substance--

in the case of a sealed source, so far as is practicable; or

in the case of any other article, so far as is reasonably practicable.

Where appropriate, the employer must ensure that suitable tests are carried out at suitable intervals to detect leakage of radioactive substances from any article to which paragraph (2) applies and the employer must make a suitable record of each such test and must retain that record for at least 2 years after the article is disposed of or until a further record is made following a subsequent test to that article.

Accounting for radioactive substances

Every employer, for the purpose of controlling radioactive substances which are involved in work with ionising radiation undertaken by that employer, must take such steps as are appropriate to account for and keep records of the quantity and location of those substances and must keep those records or a copy thereof for at least 2 years from the date on which they were made and, in addition, for at least 2 years from the date of disposal of that radioactive substance.

Keeping and moving of radioactive substances
—(29) Every employer must ensure, so far as is reasonably practicable, that any radioactive substance under its control which is not for the time being in use or being moved, transported or disposed of--

is kept in a suitable receptacle; and

is kept in a suitable store.

Every employer who causes or permits a radioactive substance to be moved (otherwise than by transporting it) must ensure that, so far as is reasonably practicable, the substance is kept in a suitable receptacle, suitably labelled, while it is being moved.

Nothing in paragraphs (1) or (2) applies in relation to a radioactive substance while it is in or on the live body or corpse of a human being.

Notification of certain occurrences

—(30) Every employer must immediately notify the Executive in any case where a quantity of a radioactive substance which was under its control and which exceeds the quantity specified for that substance in column 4 of Schedule 7--

has been released or is likely to have been released into the atmosphere as a gas, aerosol or dust; or

has been spilled or otherwise released in such a manner as to give rise to significant contamination.

[Note: Different versions of this provision apply in Scotland and in England and Wales]

[Scotland only] Paragraph (1) does not apply where such release--

was in accordance with a registration under section 10 of the Radioactive Substances Act 1993 or which was exempt from such registration by virtue of section 11 of that Act; or

was in a manner specified in an authorisation to dispose of radioactive waste under section 13 of the said Act or which was exempt from such authorisation by virtue of section 15 of that Act.

[E+W only] Paragraph (1) does not apply where such release--

was in accordance with an environmental permit under the Environmental Permitting (England and Wales) Regulations 2010 in respect of mobile radioactive apparatus within the meaning of those Regulations;

was in a manner specified in such an environmental permit in respect of radioactive waste within the meaning of those Regulations; or

did not, under regulation 12 of those Regulations, require an environmental permit.

Where an employer has reasonable cause to believe that a quantity of a radioactive substance which exceeds the quantity for that substance specified in column 5 of Schedule 7 and which was under its control is lost or has been stolen, the employer must immediately notify the Executive of that loss or theft, as the case may be.

Where an employer suspects or has been informed that an occurrence notifiable under paragraph (1) or (3) may have occurred, it must make an immediate investigation and, unless that investigation shows that no such occurrence has occurred, it must immediately make a notification in accordance with the relevant paragraph.

An employer who makes any investigation in accordance with paragraph (4) must make a report of that investigation and must, unless the investigation showed that no such occurrence occurred, keep that report or a copy thereof for at least 50 years from the date on which it was made or, in any other case, for at least 2 years from the date on which it was made.
Duties of manufacturers etc of articles for use in work with ionising radiation

—(31) In the case of articles for use at work, where that work is work with ionising radiation, section 6(1) of the 1974 Act (which imposes general duties on manufacturers etc as regards articles and substances for use at work) is modified so that any duty imposed on any person by that subsection includes a duty to ensure that any such article is so designed and constructed as to restrict so far as is reasonably practicable the extent to which employees and other persons are or are likely to be exposed to ionising radiation.

Where a person erects or installs an article for use at work, being work with ionising radiation, that person must—

undertake a critical examination of the way in which the article was erected or installed for the purpose of ensuring, in particular, that—

any safety features and warning devices operate correctly; and

there is sufficient protection for persons from exposure to ionising radiation;

consult with the radiation protection adviser that they appointed, or that the employer engaged in work with ionising radiation appointed, with regard to the nature and extent of any critical examination and the results of that examination; and

provide the employer engaged in work with ionising radiation with adequate information about proper use, testing and maintenance of the article.

Equipment used for medical exposure [Note: This regulation may be subject to change – see consultation document]

—(32) Every employer who has to any extent control of any equipment or apparatus which is used in connection with a medical exposure must, having regard to the extent of its control over the equipment, ensure that such equipment is of such design or construction and is so installed and maintained as to be capable of restricting so far as is reasonably practicable the exposure to ionising radiation of any person who is undergoing a medical exposure to the extent that this is compatible with the intended clinical purpose or research objective.

An employer who has to any extent control of any radiation equipment which is used for the purpose of diagnosis and which is installed after the date of the coming into force of these Regulations must, having regard to the extent of the employer’s control over the equipment, ensure that such equipment is provided, where practicable, with suitable means for informing the user of that equipment of the quantity of radiation produced by that equipment during a radiological procedure.

Every employer in respect of whom a duty is imposed by paragraph (1) must, to the extent that it is reasonable for the employer to do so having regard to the extent of the employer’s control over the equipment, make arrangements for a suitable quality assurance programme to be provided in respect of the equipment or apparatus for the purpose of ensuring that it remains capable of restricting so far as is reasonably practicable exposure to the extent that this is compatible with the intended clinical purpose or research objective.

Without prejudice to the generality of paragraph (3), the quality assurance programme required by that paragraph must require the carrying out of—

in respect of equipment or apparatus first used after the coming into force of this regulation, adequate testing of that equipment or apparatus before it is first used for clinical purposes;

adequate testing of the performance of the equipment or apparatus at appropriate intervals and after any major maintenance procedure to that equipment or apparatus;
where appropriate, such measurements at suitable intervals as are necessary to enable the assessment of representative doses from any radiation equipment to persons undergoing medical exposures.

Every employer who has to any extent control of any radiation equipment must take all such steps as are reasonably practicable to prevent the failure of any such equipment where such failure could result in an exposure to ionising radiation greater than that intended and to limit the consequences of any such failure.

Where an employer suspects or has been informed that an incident may have occurred in which a person while undergoing a medical exposure was, as the result of a malfunction of, or defect in, radiation equipment under the control of that employer, exposed to ionising radiation to an extent much greater than that intended, the employer must make an immediate investigation of the suspected incident and, unless that investigation shows beyond reasonable doubt that no such incident has occurred, must immediately notify the relevant authority of the incident and make or arrange for a detailed investigation of the circumstances of the exposure and an assessment of the dose received.

An employer who makes any investigation in accordance with paragraph (6) must make a report of that investigation and must--

- in respect of an immediate report, keep that report or a copy of the report for a period of at least 2 years from the date on which it was made; and
- in respect of a detailed report, keep that report or a copy of the report for a period of at least 50 years from the date on which it was made.

In this regulation, “radiation equipment” means equipment which delivers ionising radiation to the person undergoing a medical exposure and equipment which directly controls the extent of the exposure.

Misuse of or interference with sources of ionising radiation

No person may intentionally or recklessly misuse or without reasonable excuse interfere with any radioactive substance or any electrical equipment to which these Regulations apply.

PART 7

Duties of employees and Miscellaneous

Duties of employees

—(33) An employee who is engaged in work with ionising radiation must not knowingly expose themselves or any other person to ionising radiation to an extent greater than is reasonably necessary for the purposes of their work, and must exercise reasonable care while carrying out such work.

Every employee or outside worker for whom personal protective equipment is provided pursuant to regulation 9(2)(c) must--

- make full and proper use of any such personal protective equipment;
- immediately report to the employer who provided any such personal protective equipment any defect they discover in that equipment; and
take all reasonable steps to ensure that any such personal protective equipment is returned after use to the accommodation provided for it.

It is the duty of every classified outside worker not to misuse the radiation passbook issued to that worker or falsify or attempt to falsify any of the information contained in it.

Any employee to whom regulation 22(1) or regulation 13(2)(b) relates must comply with any reasonable requirement imposed on that person by that person’s employer for the purposes of making the measurements and assessments required under regulation 22(1) and regulation 24(1).

An employee who is subject to medical surveillance under regulation 25 must, when required by his employer and at the cost of the employer, present themselves during their working hours for such medical examination and tests as may be required for the purposes of paragraph (2) of that regulation and must provide the appointed doctor or employment medical adviser with such information concerning their health as the appointed doctor or employment medical adviser may reasonably require.

Where an employee has reasonable cause to believe that--
they or some other person has received an overexposure;
an occurrence mentioned in paragraph (1) or (3) of regulation 31 has occurred; or
an incident mentioned in regulation 33(6) has occurred,
they must immediately notify their employer of that belief.

Recognition of dosimetry services

—(34) The Executive (or such other person as may from time to time be specified in writing by the Executive) may, by a certificate in writing, recognise (in accordance with such criteria as may from time to time be specified by the Executive) a suitable dosimetry service for such of the purposes of these Regulations or of the Radiation (Emergency Preparedness and Public Information) Regulations 2001 as are specified in the certificate.

A certificate made pursuant to paragraph (1) may be made subject to conditions and may be revoked in writing at any time.

The Executive (or such other person as may from time to time be specified in writing by the Executive) may at such suitable periods as it considers appropriate carry out a re-assessment of any recognition granted pursuant to paragraph (1).

Enforcement

Insofar as any provision of regulation 22 is made under section 2(2) of the European Communities Act 1972, sections--
16 to 21 (approval of codes of practice and enforcement);
23 (provisions supplementary to sections 21 and 22) and 24 (appeal against improvement or prohibition notice), so far as they relate to an improvement notice;
26 (power to indemnify inspectors); and
33 to 42 (provisions as to offences),

of the 1974 Act apply to that provision as if that provision had been made under section 15 of that Act.

Defence on contravention
In any proceedings against an employer for an offence under regulation 5(2) (notification), or under regulation 6(3)(a) (registration) in connection with the use or operation of a radioactive source, it is a defence for that employer to prove that—

it neither knew nor had reasonable cause to believe that it had carried out or might be required to carry out work subject to notification or registration under the relevant regulation mentioned in paragraph (1); and

in a case where it discovered that it had carried out or was carrying out work subject to notification under regulation 5(2), it had immediately notified the relevant authority of the information required by that regulation; or

in a case where it discovered that it had carried out or was carrying out work involving the use or operation of a radioactive source which is subject to registration under the relevant regulation mentioned above, it had immediately—

ceased carrying out that work, and

communicated the circumstances of the use or operation of the radioactive source to the relevant authority.

In any proceedings against an employer for an offence under regulation 8, it is a defence for that employer to prove that—

it neither knew nor had reasonable cause to believe that it had commenced a new activity involving work with ionising radiation; and

in a case where it had discovered that it had commenced a new activity involving work with ionising radiation, it had as soon as practicable made an assessment as required by regulation 8.

In any proceedings against an employer for an offence under regulation 28(2) it is a defence for that employer to prove that—

It had received and reasonably relied on a written undertaking from the supplier of the article concerned that the article complied with the requirements of that paragraph; and

it had complied with the requirements of paragraph (3) of that regulation.

In any proceedings against an employer of an outside worker for a breach of a duty under these Regulations it is a defence for that employer to show that—

it had entered into a contract in writing with the employer who had designated an area as a controlled area and in which the outside worker was working or was to work for that employer to perform that duty on its behalf; and

the breach of duty was a result of the failure of the employer referred to in sub-paragraph (a) to fulfil that contract.

In any proceedings against any employer who has designated a controlled area in which any outside worker is working or is to work for a breach of a duty under these Regulations it is a defence for that employer to show that—

it had entered into a contract in writing with the employer of an outside worker for that employer to perform that duty on its behalf; and

the breach of duty was a result of the failure of the employer referred to in sub-paragraph (a) to fulfil that contract.

The person charged is not, without leave of the court, entitled to rely on the defence referred to in paragraph (4) or (5) unless, within a period ending seven clear days before the hearing, that person has served on the prosecutor a notice in writing of that person’s intention to rely on the defence and this notice must be accompanied by a copy of the contract on which that person intends to rely and, if that contract is not in English, an accurate translation of that contract into English.
Where a contravention of these Regulations by any person is due to the act or default of some other person, that other person will be guilty of the offence which would, but for any defence under this regulation available to the first-mentioned person, be constituted by the act or default.

Exemption certificates

—(36) Subject to paragraph (2), the relevant authority may, by a certificate in writing, exempt any person or class of persons; any premises or class of premises; or any equipment, apparatus or substance or class of equipment, apparatus or substance, from any requirement or prohibition imposed by these Regulations and any such exemption may be granted subject to conditions and to a limit of time and may be revoked by a certificate in writing at any time.

The relevant authority must not grant an exemption unless, having regard to the circumstances of the case and in particular to—

the conditions, if any, which it proposes to attach to the exemption; and any other requirements imposed by or under any enactments which apply to the case,

it is satisfied that—

the health and safety of persons who are likely to be affected by the exemption will not be prejudiced in consequence of it; and

compliance with the fundamental radiation protection provisions underlying regulations 9(1) and (2)(a), 12, 13(1), 17(1) and (3), 20(1), 21(1), 22(1), 25(2) and 33(1) will be achieved.

Where the only work being undertaken is that referred to in regulation 3(1)(b), paragraph 2(d) is to be read and applied as if the references to regulations 13(1), 17(1) and (3), 20(1), 21(1), 22(1), 25(2) and 33(1) were omitted.

Extension outside Great Britain

—(37) Subject to paragraph (2), these Regulations apply to any work outside Great Britain to which sections 1 to 59 and 80 to 82 of the 1974 Act apply by virtue of the Health and Safety at Work etc Act 1974 (Application outside Great Britain) Order 2013 as they apply to work within Great Britain.

For the purposes of paragraph (1), in any case where it is not reasonably practicable for an employer to comply with the requirements of these Regulations in so far as they relate to functions being performed by an appointed doctor or employment medical adviser or by an approved dosimetry service, it is sufficient compliance with any such requirements if the employer makes arrangements affording an equivalent standard of protection for its employees and those arrangements are set out in local rules.

 Modifications relating to the Ministry of Defence etc

—(38) In this regulation, any reference to—

“visiting forces” is a reference to visiting forces within the meaning of any provision of Part 1 of the Visiting Forces Act 1952; and

“headquarters or organisation” is a reference to a headquarters or organisation designated for the purposes of the International Headquarters and Defence Organisations Act 1964.
The Secretary of State for Defence may, in the interests of national security, by a certificate in writing exempt--

Her Majesty’s Forces;
visiting forces;
any member of a visiting force working in or attached to any headquarters or organisation; or
any person engaged in work with ionising radiation for, or on behalf of, the Secretary of State for Defence,

from all or any of the requirements or prohibitions imposed by these Regulations and any such exemption may be granted subject to conditions and to a limit of time and may be revoked at any time by a certificate in writing, except that, where any such exemption is granted, suitable arrangements must be made for the assessment and recording of doses of ionising radiation received by persons to whom the exemption relates.

Sub-paragraph (i) of regulation 22(3) does not apply in relation to a practice carried out--
by or on behalf of the Secretary of State for Defence;
by a visiting force; or
by any member of a visiting force in or attached to any headquarters or organisation.

Regulations 5 (notification), 6 (registration) and 7 (licensing) do not apply in relation to work carried out by visiting forces or any headquarters or organisation on premises under the control of such visiting force, headquarters or organisation, as the case may be, or on premises under the control of the Secretary of State for Defence.

The requirement of regulation 5(2) to notify the particulars specified by the Executive only applies in relation to the particulars (if so specified by the Executive) set out in paragraph (9), and the requirement in regulation 5(3) does not apply at all, in any case where the Secretary of State for Defence decides that not to so restrict the application of those regulations would be against the interests of national security or where suitable alternative arrangements have been agreed with the relevant authority.

Regulation 5(4) does not apply to an employer in relation to work with ionising radiation undertaken for or on behalf of the Secretary of State for Defence, visiting forces or any headquarters or organisation.

Regulations 23(6), (7) and (8) and regulation 25(9) do not apply in relation to visiting forces or any member of a visiting force working in or attached to any headquarters or organisation.

In regulation 26(1) the requirement to notify the relevant authority of a suspected overexposure and the results of the consequent investigation and assessment do not apply in relation to the exposure of--
a member of a visiting force; or
a member of a visiting force working in or attached to a headquarters or organisation.

The particulars referred to in paragraph (5) are--
the name and address of the employer and a contact telephone or fax number or email address
the address of the premises where or from where the work activity is to be carried out and a telephone or fax number or email address at such premises;
the nature of the business of the employer;
dates of notification and commencement of the work activity.

Transitional provisions and savings

Schedule 8, which makes transitional provisions and savings, has effect.
Consequential amendments and revocation

—(39) Schedule 9, which contains consequential amendments to primary legislation and instruments, has effect.
The Ionising Radiations Regulations 1999 are revoked.

Review

—(40) The Secretary of State must from time to time—
carry out a review of these Regulations;
set out the conclusions of the review in a report; and
publish the report.

In carrying out the review the Secretary of State must, so far as is reasonable, have regard to how the Directive is implemented in other member States.

The report must in particular—
set out the objectives intended to be achieved by the Directive and by these Regulations;
assess the extent to which those objectives are achieved; and
assess whether those objectives remain appropriate and, if so, the extent to which they could be achieved with a system that imposes less regulation.

The first report under this regulation must be published before the end of the period of five years beginning with the day on which these Regulations come into force.

Reports under this regulation must afterwards be published at intervals not exceeding five years.

SCHEDULE 1

Work not required to be notified under regulation 5

1. Work with ionising radiation is not required to be notified in accordance with regulation 5 when the only such work being carried out is in one or more of the following categories—
where the concentration of activity per unit mass of a radioactive substance does not exceed the concentration specified in column 2 of Part I of Schedule 7;
where the quantity of radioactive substance involved does not exceed the quantity specified in column 3 of Part I of Schedule 7;
higher values than set out in subparagraphs (a) and (b) that, for specific applications, are approved by the Executive and satisfy the general exemption and clearance criteria set out in Part III of Schedule 7;
where apparatus contains radioactive substances in a quantity exceeding the values specified in sub-paragraphs (a) and (b) provided that—
the apparatus is of a type approved by the Executive;
the apparatus is constructed in the form of a sealed source;
the apparatus does not under normal operating conditions cause a dose rate of more than 1 mSvh\(^1\) at a distance of 0.1 m from any accessible surface; and
conditions for the disposal of the apparatus have been specified by the appropriate authority;

the operation of any electrical apparatus to which these Regulations apply other than apparatus referred to in sub-paragraph (f) provided that—
the apparatus is of a type approved by the Executive; and
the apparatus does not under normal operating conditions cause a dose rate of more than 1 mSv h\(^{-1}\) at a distance of 0.1 m from any accessible surface;

the operation of—

any cathode ray tube intended for the display of visual images; or
any other electrical apparatus operating at a potential difference not exceeding 30 kv,

provided that the operation of the tube or apparatus does not under normal operating conditions cause a dose rate of more than 1 mSv h\(^{-1}\) at a distance of 0.1 m from any accessible surface;

where the work involves material contaminated with radioactive substances resulting from authorised releases which the appropriate authority has declared not to be subject to further control.

**specific types of practices in respect of which the Executive acting in accordance with the general exemption criteria set out in Part III of Schedule 7 assesses that exemption from notification is appropriate.**

In this Schedule, “the appropriate authority”—
in relation to England, means the Environment Agency;
in relation to Wales, means the Natural Resources Body for Wales.
in relation to Scotland, has the same meaning as that assigned to the phrase “appropriate Agency” by section 47(1) of the Radioactive Substances Act 1993.

**SCHEDULE 2**

Information for licensing: matters to which the Executive must have regard

1. Responsibilities and organisational arrangements for protection and safety.

Staff competences, including information and training.
Design features of the facility and of radiation sources.
Anticipated occupational and public exposures in normal operation.
Safety assessment of the activities and the facility in order to:
identify ways in which potential exposures or accidental and unintended medical exposures could occur;
estimate, to the extent practicable, the probabilities and magnitude of potential exposures;
assess the quality and extent of protection and safety provisions, including engineering features, as well as administrative procedures;
define the operational limits and conditions of operation.

Emergency procedures.

Maintenance, testing, inspection and servicing so as to ensure that the radiation source and the facility continue to meet the design requirements, operational limits and conditions of operation throughout their lifetime.

Management of [radioactive waste] and arrangements for the disposal of such waste, in accordance with applicable regulatory requirements.
Management of disused sources.

Quality assurance.

SCHEDULE 3
Dose Limits
Part I
Classes of Persons to whom Dose Limits Apply

Employees and trainees of 18 years of age or above

1. For the purposes of regulation 12(1), the limit on effective dose for any employee or trainee, being of 18 years of age or above, is 20 mSv in any calendar year.

Without prejudice to paragraph 1--

the limit on equivalent dose for the lens of the eye is--

20 mSv in a calendar year; or

in accordance with conditions specified by the Executive from time to time, 100 mSv in any five consecutive calendar years subject to a maximum equivalent dose of 50 mSv in any single calendar year;

the limit on equivalent dose for the skin is 500 mSv in a calendar year as applied to the dose averaged over any area of 1 cm² regardless of the area exposed;

the limit on equivalent dose for the hands, forearms, feet and ankles is 500 mSv in a calendar year.

Trainees aged under 18 years

For the purposes of regulation 12(1), the limit on effective dose for any trainee under 18 years of age is 6 mSv in any calendar year.

Without prejudice to paragraph 3--

the limit on equivalent dose for the lens of the eye is 15 mSv in a calendar year;

the limit on equivalent dose for the skin is 150 mSv in a calendar year as applied to the dose averaged over any area of 1 cm² regardless of the area exposed;

the limit on equivalent dose for the hands, forearms, feet and ankles is 150 mSv in a calendar year.

Women of reproductive capacity

Without prejudice to paragraphs 1 and 3, the limit on equivalent dose for the abdomen of a woman of reproductive capacity who is at work, being the equivalent dose from external radiation resulting from exposure to ionising radiation averaged throughout the abdomen, is 13 mSv in any consecutive period of three months.

Other persons

Subject to paragraph 7, for the purposes of regulation 12(1) the limit on effective dose for any person other than an employee or trainee referred to in paragraphs 1 or 3, including any person below the age of 16, is 1 mSv in any calendar year.
Paragraph 6 does not apply in relation to any person (not being a comforter or carer) who may be exposed to ionising radiation resulting from the medical exposure of another and in such a case the limit on effective dose for any such person is 5 mSv in any period of 5 consecutive calendar years.

Without prejudice to paragraphs 6 and 7--
the limit on equivalent dose for the lens of the eye is 15 mSv in any calendar year;
the limit on equivalent dose for the skin is 50 mSv in any calendar year averaged over any 1 cm² area regardless of the area exposed;
the limit on equivalent dose for the hands, forearms, feet and ankles is 50 mSv in a calendar year.

Part II

For the purposes of regulation 12(2), the limit on effective dose for employees or trainees of 18 years or above is 100 mSv in any period of five consecutive calendar years subject to a maximum effective dose of 50 mSv in any single calendar year.

Without prejudice to paragraph 9--
the limit on equivalent dose for the lens of the eye is--

20 mSv in a calendar year; or

in accordance with conditions specified by the Executive from time to time, 100 mSv in any five consecutive calendar years subject to a maximum equivalent dose of 50 mSv in any single calendar year;
the limit on equivalent dose for the skin is 500 mSv in a calendar year as applied to the dose averaged over any area of 1 cm² regardless of the area exposed;
the limit on equivalent dose for the hands, forearms, feet and ankles is 500 mSv in a calendar year.

Without prejudice to paragraph 9, the limit on equivalent dose for the abdomen of a woman of reproductive capacity who is at work, being the equivalent dose from external radiation resulting from exposure to ionising radiation averaged throughout the abdomen, is 13 mSv in any consecutive period of three months.

The employer must ensure that any employee in respect of whom regulation 12(2) applies is not exposed to ionising radiation to an extent that any dose limit specified in paragraphs 9 to 11 is exceeded.

An employer must not put into effect a system of dose limitation pursuant to regulation 12(2) unless--

(a) the radiation protection adviser and any employees who are affected have been consulted;
(b) any employees affected and the approved dosimetry service have been informed in writing of the decision and of the reasons for that decision; and
(c) notice has been given to the relevant authority at least 28 days (or such shorter period as the relevant authority may allow) before the decision is put into effect giving the reasons for the decision.

Where there is reasonable cause to believe that any employee has been exposed to an effective dose greater than 20 mSv in any calendar year, the employer must, as soon as is practicable--

(a) undertake an investigation into the circumstances of the exposure for the purpose of determining whether the dose limit referred to in paragraph 9 is likely to be complied with; and
(b) notify the relevant authority of that suspected exposure.
An employer must review the decision to put into effect a system of dose limitation pursuant to regulation 12(2) at appropriate intervals and in any event not less than once every five years.

Where as a result of a review undertaken pursuant to paragraph 15 an employer proposes to revert to a system of annual dose limitation pursuant to regulation 12(1), the provisions of paragraph 13 apply as if the reference in that paragraph to regulation 12(2) was a reference to regulation 12(1).

Where an employer puts into effect a system of dose limitation in pursuance of regulation 12(2), he must record the reasons for that decision and must ensure that the record is preserved for a period of 50 years from the date of its making.

In any case where--

the dose limits specified in paragraph 9 are being applied by an employer in respect of an employee; and

the relevant authority is not satisfied that it is impracticable for that employee to be subject to the dose limit specified in paragraph 1 of Part I of this Schedule,

the relevant authority may require the employer to apply the dose limit specified in paragraph 1 of Part I with effect from such time as the relevant authority may consider appropriate having regard to the interests of the employee concerned.

In any case where, as a result of a review undertaken pursuant to paragraph 15, an employer proposes to revert to an annual dose limitation in accordance with regulation 12(1), the relevant authority may require the employer to defer the implementation of that decision to such time as the relevant authority may consider appropriate having regard to the interests of the employee concerned.

Any person who is aggrieved by the decision of the relevant authority taken pursuant to paragraphs 18 or 19 may appeal to the Secretary of State.

Sub-sections (2) to (6) of section 44 of the 1974 Act apply for the purposes of paragraph 20 as they apply to an appeal under section 44(1) of that Act.

The Health and Safety Licensing Appeals (Hearings Procedure) Rules 1974, as respects England and Wales, and the Health and Safety Licensing Appeals (Hearing Procedure) (Scotland) Rules 1974, as respects Scotland, apply to an appeal under paragraph 20 as they apply to an appeal under section 44(1) of the 1974 Act, but with the modification that references to a licensing authority are to be read as references to the relevant authority.

SCHEDULE 4

Matters in respect of which a radiation protection adviser must be consulted

1. The implementation of requirements as to controlled and supervised areas.

The prior examination of plans for installations and the acceptance into service of new or modified sources of ionising radiation in relation to any engineering controls, design features, safety features and warning devices provided to restrict exposure to ionising radiation.

The regular calibration of equipment provided for monitoring levels of ionising radiation and the regular checking that such equipment is serviceable and correctly used.

The periodic examination and testing of engineering controls, design features, safety features and warning devices and regular checking of systems of work provided to restrict exposure to ionising radiation.
SCHEDULE 5

Particulars to be entered in the radiation passbook

1. Individual serial number of the passbook.

A statement that the passbook has been approved by the Executive for the purpose of these Regulations.

Date of issue of the passbook by the approved dosimetry service.

The name, telephone number and mark of endorsement of the issuing approved dosimetry service.

The name, address, telephone number and e-mail address of the employer.

Full name (surname, forenames), date of birth, gender and national insurance number of the outside worker to whom the passbook has been issued.

Date of the last medical review of the outside worker and the relevant classification in the health record maintained under regulation 25 as fit, fit subject to conditions (which must be specified) or unfit.

The relevant dose limits applicable to the outside worker to whom the passbook has been issued.

The cumulative dose assessment in mSv for the year to date for the outside worker, external (whole body, organ or tissue) and/or internal as appropriate and the date of the end of the last assessment period.

In respect of services performed by the outside worker—

the name and address of the employer responsible for the controlled area;

the period covered by the performance of the services;

the following estimated dose information, as appropriate—

an estimate of any whole body effective dose in mSv received by the outside worker;

in the event of non-uniform exposure, an estimate of the equivalent dose in mSv to organs and tissues as appropriate; and

in the event of internal contamination, an estimate of the activity taken in or the committed dose.

SCHEDULE 6

Particulars to be contained in a health record

The following particulars must be contained in a health record made for the purposes of regulation 25(3)—

(a) the employee’s—

full name;

sex;

date of birth;

permanent address; and

National Insurance number;

the date of the employee’s commencement as a classified person in present employment;
the nature of the employee’s employment;
in the case of a female employee, a statement as to whether that employee is likely to receive
in any consecutive period of three months an equivalent dose of ionising radiation for the
abdomen exceeding 13 mSv;
the date of last medical examination or health review carried out in respect of the employee;
the type of the last medical examination or health review carried out in respect of the
employee;
a statement by the appointed doctor or employment medical adviser made as a result of the
last medical examination or health review carried out in respect of the employee
classifying the employee as fit, fit subject to conditions (which should be specified) or
unfit;
in the case of a female employee in respect of whom a statement has been made under
paragraph (d) to the effect that that employee is likely to receive in any consecutive
period of three months an equivalent dose of ionising radiation for the abdomen
exceeding 13 mSv, a statement by the appointed doctor or employment medical adviser
certifying whether in their professional opinion the employee should be subject to the
additional dose limit specified in paragraphs 5 and 11 of Schedule 3;
in relation to each medical examination and health review, the name and signature of the
appointed doctor or employment medical adviser;
the name and address of the approved dosimetry service with whom arrangements have been
made for maintaining the dose record in accordance with regulation 22.

SCHEDULE 7
Quantities and Concentrations of radionuclides

Part I
Table of Radionuclides

<table>
<thead>
<tr>
<th>Radionuclide name, symbol, isotope</th>
<th>Concentration for notification Regulation 5 (Bq/g)</th>
<th>Quantity for notification Regulation 5 (Bq)</th>
<th>Concentration for registration Regulation 6 (Bq/g)</th>
<th>Quantity for notification of occurrence Regulation 30(1) (Bq)</th>
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<tr>
<td>Ce-254</td>
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<tr>
<td>Ce-255</td>
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<tr>
<td>Ce-256</td>
<td></td>
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</tr>
</tbody>
</table>
Part II

Quantity ratios for more than one radionuclide

1. For the purpose of Regulation 2(4), the quantity ratio for more than one radionuclide is the sum of the quotients of the quantity of a radionuclide present Qp divided by the quantity of that radionuclide specified in the appropriate column of Part I of this Schedule Qlim, namely—

[diagram]

In any case where the isotopic composition of a radioactive substance is not known or is only partially known, the quantity ratio for that substance is to be calculated by using the values specified in the appropriate column in Part I for “other radionuclides not listed above” for any radionuclide that has not been identified or where the quantity of a radionuclide is uncertain, unless the employer can show that the use of some other value is appropriate in the circumstances of a particular case, when the employer may use that value.

Part III

General exemption and clearance criteria

1. The general criteria for the exemption of practices from notification are as follows:

   - the radiological risks to individuals caused by the practice are sufficiently low, as to be of no regulatory concern; and
   - the type of practice has been determined to be justified; and
   - the practice is inherently safe.

Practices involving small amounts of radioactive substances or low activity concentrations, comparable to the exemption values laid down in columns 2, 3 or 4 of Part I of Schedule 7 are deemed to fulfil criterion (c).

Practices involving amounts of radioactive substances or activity concentrations below the exemption values laid down in columns 2, 3 or 4 of Part I of Schedule 7, are deemed to comply with criterion (a) without further consideration. This is also the case for the values in [BSSD Annex VII, Table A, Part 2 (NORMS) – not yet included in the draft regulations], with the exception of the recycling of residues in building materials or the case of specific exposure pathways, for instance, drinking water.

Where amounts of radioactive substances or activity concentrations do not comply with the values laid down in columns 2, 3 or 4 of Part I of Schedule 7, an assessment may be made in the light of the general criteria (a) to (c) above. For compliance with the general criterion (a), it must be demonstrated that employees would not exceed the dose limit set out in paragraph 6 of Schedule 3, and the following criteria for the exposure of members of the public are met in all feasible circumstances:

For artificial radionuclides:

   The effective dose expected to be incurred by a member of the public due to the exempted practice is of the order of 10 μSv or less in a year.

For naturally-occurring radionuclides:

   The dose increment, allowing for the prevailing background radiation from natural radiation sources, liable to be incurred by an individual due to the exempted practice is of the order of 1 mSv or less in a year. The assessment of doses to members of the public must take into account the pathways of exposure through airborne or liquid effluent and the pathways resulting from the disposal or recycling of solid residues.
Part IV

Activity values defining high-activity sealed sources

For radionuclides not listed in the table below, the relevant activity is the same as the D-value defined in the IAEA publication: Dangerous quantities of radioactive material (D-values), (EPR-D-VALUES 2006).

<table>
<thead>
<tr>
<th>Radionuclide</th>
<th>Activity (TBq)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Am-241</td>
<td>$6 \times 10^{-2}$</td>
</tr>
<tr>
<td>Am-241/Be-9*</td>
<td>$6 \times 10^{-2}$</td>
</tr>
<tr>
<td>Cf-252</td>
<td>$2 \times 10^{-2}$</td>
</tr>
<tr>
<td>Cm-244</td>
<td>$5 \times 10^{-2}$</td>
</tr>
<tr>
<td>Co-60</td>
<td>$3 \times 10^{-2}$</td>
</tr>
<tr>
<td>Cs-137</td>
<td>$1 \times 10^{-1}$</td>
</tr>
<tr>
<td>Gd-153</td>
<td>$1 \times 10^{-0}$</td>
</tr>
<tr>
<td>Ir-192</td>
<td>$8 \times 10^{-2}$</td>
</tr>
<tr>
<td>Pm-147</td>
<td>$4 \times 10^{1}$</td>
</tr>
<tr>
<td>Pu-238</td>
<td>$6 \times 10^{-2}$</td>
</tr>
<tr>
<td>Pu-239/Be-9*</td>
<td>$6 \times 10^{-2}$</td>
</tr>
<tr>
<td>Ra-226</td>
<td>$4 \times 10^{-2}$</td>
</tr>
<tr>
<td>Se-75</td>
<td>$2 \times 10^{-1}$</td>
</tr>
<tr>
<td>Sr-90 (Y-90)</td>
<td>$1 \times 10^{0}$</td>
</tr>
<tr>
<td>Tm-170</td>
<td>$2 \times 10^{1}$</td>
</tr>
<tr>
<td>Yb-169</td>
<td>$3 \times 10^{-1}$</td>
</tr>
</tbody>
</table>

(*) The activity given is that of the alpha-emitting radionuclide.

SCHEDULE 8

Transitional provisions and savings

Part 1

Interpretation and general transitional provisions

1.—(1) In this Schedule—
“the 1999 Regulations” means the Ionising Radiations Regulations 1999;
“restated provision” means any provision of these Regulations so far as it corresponds (with or without modification) to a provision of the 1999 Regulations;
“superseded provision” means any provision of the 1999 Regulations as it has effect immediately before 1st January 2018 so far as it corresponds (with or without modification) to a provision of these Regulations;

In this Schedule references to things done include references to things omitted to be done.

Any thing done, or having effect as if done, under or for the purposes of any superseded provision, if effective immediately before 1st January 2018, has effect, so far as is required for continuing its effect on and after that date, as if done under or for the purposes of the corresponding restated provision.

Where any superseded provision—

prescribed a penalty for an offence of any kind, that penalty continues to apply to offences of that kind committed before 1st January 2018;

provides a defence to a contravention, the superseded provision continues to have effect on and after 1st January 2018 to the extent necessary to enable the defence to be available in relation to a contravention that took place before that date.

Any proceedings in connection with an offence or alleged offence which have been commenced under a superseded provision before 1st January 2018 may be continued and completed as if the superseded provision continued to have effect on and after 1st January 2018.

—(2) Where—

an offence has been, or is alleged to have been, committed under a superseded provision before 1st January 2018, but

proceedings have not been commenced before that date in connection with that offence, or alleged offence,

proceedings in connection with the offence or alleged offence under the superseded provision may be commenced under the relevant superseded provision as if the superseded provision continued to have effect on and after 1st January 2018.

Sub-paragraph (1) does not apply in any case where it was determined before 1st January 2018 not to commence proceedings in connection with the offence or alleged offence.

This Part of this Schedule is subject to any provision made these Regulations.

Any specific provision in Part 2 of this Schedule is not to be taken to affect the generality of the provisions of this Part.

Part 2

Specific Matters

Where on or before 5th February 2018 an employer commences for the first time since the coming into force of these Regulations work in respect of which a notification is required under regulation 5(2), it will be sufficient compliance with that regulation if the employer notifies the Executive in respect of that work and provides the particulars required under regulation 5(2) before 5th February 2018.

Where on or before 5th February 2018 a person carries out a registrable practice under regulation 6(3) it will be sufficient compliance with that regulation if the person completes the registration process under regulation 6(3) on or before 5th February 2018.

A person who carries out a licensable practice under regulation 7 on or before 5th February 2018 is deemed to hold a licence for that practice under regulation 7(3) until 5th February 2018.
Where an employer has, in respect of an employee, applied the dose limits set out in paragraphs 9 to 11 of Schedule 4 to the 1999 Regulations in accordance with the requirements of regulation 11(2) of those Regulations and those dose limits have effect immediately before 1st January 2018, the Executive is deemed to have approved, for the purposes of regulation 12(2) of these Regulations, the application of the dose limits, in respect of that employee, set out in paragraphs 9 to 11 of Schedule 3 to these Regulations.

The deemed approval granted in paragraph 11 is valid until 5th February 2018.

A radiation passbook approved for the purposes of the 1999 Regulations and issued prior to [30th April 2018] in respect of an outside worker employed by an employer in Great Britain and which was at that date valid remains valid for such time as the worker to whom the passbook relates continues to be employed by the same employer.

Where a superseded provision provides a period of time within which an aggrieved person may apply for a decision to be reviewed, that period of time continues to apply on and after 1st January 2018 in relation to any decision notified to the aggrieved person before 1 January 2018.

SCHEDULE 9

Consequential Amendments
### Revised ACOP text

<table>
<thead>
<tr>
<th>Guidance Paragraph and Current/new Regulation reference</th>
<th>Current ACOP</th>
<th>New and revised ACOP</th>
<th>Decision on status</th>
<th>Rationale for decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Reg 2(1)/3(1)</td>
<td>For a substance used in a practice, its activity should never be disregarded for the purposes of radiation protection where that activity exceeds the values set out in column 2 of Schedule 8, subject to the quantity of the substance also exceeding the values set out in column 3 of Schedule 8.</td>
<td>No change.</td>
<td>Retain as ACOP</td>
<td>This will ensure consistency with Other Government Departments legislation such as Environmental Permitting Regulations</td>
</tr>
<tr>
<td>11 Reg 2(1)/3(1)</td>
<td>In the special case of substances containing naturally occurring radionuclides used in work other than a practice, their activity cannot be disregarded for the purposes of radiation protection where their use is likely to lead to employees or other people receiving an effective dose of ionising radiations in excess of 1 millisievert in a year.</td>
<td>No change.</td>
<td>Retain as ACOP – more work required</td>
<td>More work required on the identification of Naturally Occurring Radioactive Materials (NORM) has been discussed – identified industries using NORM listed in BSSD should be considered as a new schedule in IRR. This list is not exhaustive so further numerical quantification of NORM to help industry is required.</td>
</tr>
</tbody>
</table>
Where a radiation employer is required to undertake a prior risk assessment, the following matters must be considered, where they are relevant:

(a) the nature of the sources of ionising radiation to be used, or likely to be present, including accumulation of radon in the working environment;
(b) estimated radiation dose rates to which anyone can be exposed;
(c) the likelihood of contamination arising and being spread;
(d) the results of any previous personal dosimetry or area monitoring relevant to the proposed work;
(e) advice from the manufacturer or supplier of equipment about its safe use and maintenance;
(f) engineering control measures and design features already in place or planned;
(g) any planned systems of work;
(h) estimated levels of airborne and surface contamination likely to be encountered;
(i) the effectiveness and the suitability of personal protective equipment to be provided;
(j) the extent of unrestricted access to working areas where dose rates or contamination levels

| No change. | Retain as ACOP | Clarifies the content of the risk assessment specific to ionising radiation and adds to both IRRs and MHSWR obligations. |
are likely to be significant;

(k) possible accident situations, their likelihood and potential severity;

(l) the consequences of possible failures of control measures - such as electrical interlocks, ventilation systems and warning devices - or systems of work;

(m) steps to prevent identified accidents situations, or limit their consequences.

<table>
<thead>
<tr>
<th>45</th>
<th>Reg 7/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>This prior risk assessment should enable the employer to determine:</td>
<td>This prior risk assessment should enable the employer to determine:</td>
</tr>
<tr>
<td>(p) what action is needed to ensure that the radiation exposure of all persons is kept as low as reasonably practicable (regulation 8(1))</td>
<td>(a) what action is needed to ensure that the radiation exposure of all persons is kept as low as reasonably practicable (regulation 8(1))</td>
</tr>
<tr>
<td>(q) what steps are necessary to achieve this control of exposure by the use of engineering controls, design features, safety devices and warning devices (regulation 8(2)(a)) and, in addition, by the development of systems of work (regulation 8(2)(b));</td>
<td>(b) what steps are necessary to achieve this control of exposure by the use of engineering controls, design features, safety devices and warning devices (regulation 8(2)(a)) and, in addition, by the development of systems of work (regulation 8(2)(b));</td>
</tr>
<tr>
<td>(r) whether it is appropriate to provide personal protective equipment and if so what type would be adequate and suitable (regulation 8(2)(c));</td>
<td>(c) whether it is appropriate to provide personal protective equipment and if so what type would be adequate and suitable (regulation 8(2)(c));</td>
</tr>
<tr>
<td>(s) whether it is appropriate to establish any dose constraints for planning or design purposes, and if so what values should be used (regulation 8(3));</td>
<td></td>
</tr>
<tr>
<td>(t) the need to alter the working conditions of any</td>
<td></td>
</tr>
</tbody>
</table>

Retain as ACOP – add specific content

Clarifies the content of the risk assessment specific to ionising radiation and adds to both IRRs and MHSWR obligations.

To clarify that prior risk assessment will also help to determine leak testing, a bullet point will be added – this will be deleted from ACOP paragraph 283.
female employee who declares she is pregnant or is breastfeeding (regulation 8(5));

(u) an appropriate investigation level to check that exposures are being restricted as far as reasonably practicable (regulation 8(7));

(v) what maintenance and testing schedules are required for the control measures selected (regulation 10);

(w) what contingency plans are necessary to address reasonably foreseeable accidents (regulation 12);

(x) the training needs of classified and non-classified employees (regulation 14);

(y) the need to designate specific areas as controlled or supervised areas and to specify local rules (regulations 16 and 17);

(z) the actions needed to ensure restriction of access and other specific measures in controlled or supervised areas (regulation 18);

(aa) the need to designate certain employees as classified persons (regulation 20);

(bb) the content of a suitable programme of dose assessment for employees designated as classified persons and for others who enter controlled areas (regulations 18 and 21);

(cc) the responsibilities of managers for ensuring compliance with these type would be adequate and suitable (regulation 8(2)(c));

(d) whether it is appropriate to establish any dose constraints for planning or design purposes, and if so what values should be used (regulation 8(3));

(e) the need to alter the working conditions of any female employee who declares she is pregnant or is breastfeeding (regulation 8(5));

(f) an appropriate investigation level to check that exposures are being restricted as far as reasonably practicable (regulation 8(7));

(g) what maintenance and testing schedules are required for the control measures selected (regulation 10);

(h) what contingency plans are necessary to address reasonably foreseeable accidents (regulation 12);

(i) the training needs of
Regulations; and
(dd) an appropriate programme of monitoring or auditing of arrangements to check that the requirements of these Regulations are being met.

- classified and non-classified employees (regulation 14);

- the need to designate specific areas as controlled or supervised areas and to specify local rules (regulations 16 and 17);

- the actions needed to ensure restriction of access and other specific measures in controlled or supervised areas (regulation 18);

- the need to designate certain employees as classified persons (regulation 20);

- the content of a suitable programme of dose assessment for employees designated as classified persons and for others who enter controlled areas (regulations 18 and 21);

- the requirements for the leak testing of radioactive sources (regulation 27)

- the responsibilities of managers for ensuring
<p>| 59 Reg 8(1)/9(1) | Dose sharing should not be used as a primary means of keeping exposures below the dose limits. Rather, the radiation employer should give priority to improving engineering controls and adopting other means of restricting exposure, including changing the methods of work. However, if a choice has to be made between restricting doses to individuals and restricting doses to a group of persons, priority should be given to keeping individual doses as far below dose limits as is reasonably practicable. | Dose sharing should not be used as a primary means of keeping exposures below the dose limits. | Partial deletion – keep first sentence as ACOP, the remaining text redraft and move to guidance. | The first sentence gives clear instruction on compliance. The text following is guidance rather than ACOP. |
| 60 Reg 8(1)/9(1) | Radiation employers should take particular steps to restrict the exposure of any employees who would not normally be exposed to ionising radiation in the course of their work. The dose control measures should make it unlikely that such persons would receive an effective dose greater than 1 millisievert per year or an equivalent dose which exceeds that specified as a dose limit for any other person in Schedule 4. | Employers must restrict the exposure of any employees who would not normally be exposed to ionising radiation in the course of their work. The dose control measures must make it unlikely that such persons would receive an effective dose greater than 1 millisievert per year or an equivalent dose which exceeds that specified as a dose limit for any other person in Schedule 4. | Retain as ACOP | ACOP makes it clear that for employees not normally exposed to ionising radiation, exposure must not exceed 1mSv per year. The Regulation only refers to employees without further clarification. This is consistent with the principle of dose limitation set out in the directive. |</p>
<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
<th>ACOP Requirement</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8(1)/9(1)</td>
<td>Radioactive materials, including those in the form of sealed sources, should not be held or directly manipulated in the hand (or close to the hand) if it is practicable for the task to be completed by other means, unless the skin of the hand is unlikely to receive a significant dose and the employee is unlikely to become significantly contaminated with radioactive substances.</td>
<td>No ACOP required</td>
<td>Full deletion – move to guidance</td>
</tr>
<tr>
<td>8(2)/9(2)</td>
<td>Where reasonably practicable, work involving exposure to external radiation must be done in a room, enclosure, cabinet or purpose-made structure which is provided with adequate shielding. In other cases, adequate local shielding should be used as far as reasonably practicable. Shielding, including beam collimation, will normally be adequate if designed to reduce dose rates below 7.5 microsieverts per hour in specific locations where persons will be working. If the device is designed for use in public areas or where there is continuous access to the working area by employees or other persons not directly involved in the work, the shielding should be designed to reduce dose rates to the lowest level that is reasonably practicable. In this case, the dose rate should be so low that it is unnecessary to designate the area around the device as a supervised area.</td>
<td>Where reasonably practicable, work involving exposure to external radiation must be done in a room, enclosure, cabinet or purpose-made structure which is provided with adequate shielding. Shielding will be adequate if it is not necessary to designate the area around the room, enclosure, cabinet, radiation store or purpose-made structure as a supervised area.</td>
<td>Retain as ACOP Redraft and streamline</td>
</tr>
<tr>
<td>8(2)/9(2)</td>
<td>Fluoroscopic devices should be provided with viewing facilities which do not permit direct vision of the fluoroscopy screen.</td>
<td></td>
<td>Possible full deletion</td>
</tr>
<tr>
<td>83</td>
<td>Reg 8(2)/9(2)</td>
<td>Radiation employers should give priority to the containment of radioactive substances as a means of preventing dispersal or contamination. Where such containment alone is not sufficient to give the required protection, ventilation should be provided. A building, room or enclosure being built or modified for work with unsealed radioactive material should incorporate design features which take into account the risk of contamination likely to arise from the work. In particular, radiation employers should take steps to ensure ease of cleaning and decontamination of worktops, floors, etc. There should also be provision for safe decommissioning or dismantling of equipment which may have become internally contaminated.</td>
<td>Radiation employers must give priority to the containment of radioactive substances as a means of preventing dispersal or contamination. Where such containment alone is not sufficient to give the required protection, ventilation should be provided.</td>
</tr>
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</tr>
<tr>
<td>87</td>
<td>Reg 8(2)/9(2)</td>
<td>Where control systems permit, interlocks or trapped key systems should be provided and properly used where they can prevent access to high dose rate enclosures (for example in which employed persons could receive an effective dose greater than 20 millisieverts or an equivalent dose in excess of a dose limit within several minutes when radiation emission is under way). They should be fitted so that the control system will ensure an exposure: (d) cannot commence while the access door, access hatch, cover or appropriate barrier to the enclosure is open; (e) is interrupted if the access door, access hatch, cover or barrier is opened; and</td>
<td>Where control systems permit, interlocks or trapped key systems should be provided and properly used where they can prevent access to high dose rate enclosures in which employed persons could receive an effective dose greater than 20 millisieverts or an equivalent dose in excess of a dose limit within several minutes when radiation emission is under way. They should be fitted so that the control system will ensure an exposure:</td>
</tr>
</tbody>
</table>
| (f) | does not recommence on the mere act of closing a door, access hatch, cover or barrier. | (a) | cannot commence while the access door, access hatch, cover or appropriate barrier to the enclosure is open;  
(b) is interrupted if the access door, access hatch, cover or barrier is opened; and  
(c) does not recommence on the mere act of closing a door, access hatch, cover or barrier. |  |
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</thead>
<tbody>
<tr>
<td>Reg 8(2)/9(2)</td>
<td>Where there is a risk of significant exposure arising from unauthorised or malicious operation of X-ray generators or radioactive source containers, radiation employers should make use of equipment which has been fitted with locking-off arrangements to prevent its uncontrolled use.</td>
<td>No change</td>
<td>Retain as ACOP – on the basis of legal advice and specialist expertise.</td>
<td></td>
</tr>
</tbody>
</table>
Legal advice was sought to clarify the position with respect to this, as Policy and specialists differed in opinion regarding retention of ACOP.  
Lawyers are of the opinion that this is a good example of the ACOP to help with compliance. |
| 97 Reg 8(2)/9(2) | The initiation of exposures should be under key control, or by some equally effective means, so as to prevent unintended or accidental emission of a radiation beam or exposure of a source. This is particularly important where the control point is remote from the equipment which will be activated or there is general access to equipment by members of the public or personnel who are not undertaking the work with ionising radiation. | No change | Retain as ACOP. |  
Lawyers feel this is similar to the paragraph above. This paragraph gives practical measures to avoid a breach in the regulation. |
Reg 8(2)/9(2)

<table>
<thead>
<tr>
<th>Sources of ionising radiation which can give rise to significant exposure in a very short time should be fitted with suitable warning devices which:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) indicate for a radioactive source whether it is in or out of its shielding (or the exposure shutter is open or closed);</td>
</tr>
<tr>
<td>(b) indicate for an X-ray generator when the tube is in a state of readiness to emit radiation and, except for diagnostic radiology, give a signal when the useful beam is about to be emitted and a distinguishable signal when the emission is under way unless this is impracticable;</td>
</tr>
<tr>
<td>(c) for X-ray generators other than those used for diagnostic radiology, are designed to be automatic and fail-safe, ie if the warning device itself fails the exposure will not proceed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sources of ionising radiation which can cause significant exposure in a very short time must be fitted with suitable warning devices which:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) indicate for a radioactive source whether it is in or out of its shielding (and/or the exposure shutter is open or closed);</td>
</tr>
<tr>
<td>(b) indicate for an X-ray generator when the tube is ready to emit radiation;</td>
</tr>
<tr>
<td>(c) for X-ray generators other than those used for diagnostic radiology, give a signal when the beam is about to be emitted and a distinguishable signal when the emission is under way;</td>
</tr>
<tr>
<td>(d) for X-ray generators other than those used for diagnostic radiology, are designed to be automatic and fail-safe, ie if the warning device itself fails the exposure will not proceed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retain as ACOP</th>
</tr>
</thead>
</table>

Warning devices are included as a design feature mainly on the basis of this ACOP paragraph, retention will ensure this is upheld.

An extra paragraph has been added to clarify the text for readability.
<p>| 100 Reg 8(2)/9(2) | The radiation employer should make sure that warning signals can be seen or heard by all those people who need to know the status of the radiation equipment for protection purposes. | Employers must make sure that warning signals can be seen or heard by all those people who need to know the status of the radiation equipment for protection purposes. | Retain as ACOP | This paragraph and the ACOP paragraph above have similar themes. This ACOP is required as it has been cited in a number of enforcement actions. This is particularly important for industrial radiography which is a sector priority. |
| 111 Reg 8(2)/9(2) | The radiation employer should require a check to be made with a suitable radiation monitoring instrument after each exposure using high dose rate sealed source equipment (such as that generally used for industrial radiography or processing of products) unless reliance can be placed on effective devices to ensure that the equipment has been restored to a safe state. The purpose is to establish that the sealed source has fully retracted to its shielded position and that the area is safe to enter. | Employers working with ionising radiation must make sure that a check is made with a suitable radiation monitoring instrument after each exposure using high dose rate sealed source equipment (such as that generally used for industrial radiography or processing of products). The purpose is to establish that the sealed source has fully retracted to its shielded position and that the area is safe to enter. In addition, all employees engaged in the work must wear a dosemeter which gives an audible alarm when high doses are detected. | Retain as ACOP | This text does add to compliance with reg 8(2) with respect to systems of work regarding sealed sources. Personal dosemeters with an alarm triggered by high dose rates are now an industry standard as a control measure to restrict exposure, at the time the 1999 regulations were drafted the dosemeters were relatively new. |</p>
<table>
<thead>
<tr>
<th>Reg</th>
<th>Description</th>
<th>ACOP Status</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>The term ‘adequate’ in regulation 8(2)(c) refers to the ability of the equipment to protect the wearer. The term ‘suitable’ refers to the correct matching of the equipment to the job and the person. To be considered ‘adequate and suitable’ personal protective equipment should be correctly selected and used.</td>
<td>No ACOP required</td>
<td>Full deletion – move into guidance</td>
<td>HSE already has advice available on PPE. This should be referred/link to in guidance. The directive only states that “appropriate” PPE is required</td>
</tr>
<tr>
<td>126</td>
<td>It should always be appropriate to use dose constraints in restricting exposure for carers and comforters</td>
<td>Under review with Department of Health</td>
<td>Needs discussion: Article 6.1 of the BSSD requires dose constraints to be established for carers and comforters – however this area may move over to DH and therefore could come under IRMER</td>
<td>HSE have had prolonged discussions with the Department of Health regarding the division of the responsibilities regarding medical exposure, these discussions are ongoing but may result in this moving to the new Ionising Radiation (Medical Exposures) Regulations (IRMER).</td>
</tr>
<tr>
<td>165</td>
<td>All active engineering controls and design features (eg local exhaust ventilation systems), safety features (eg electromechanical interlocks) and warning devices should be subjected to a regime of examination and test at suitable intervals.</td>
<td>No ACOP required</td>
<td>Full deletion</td>
<td>This repeats the regulation and does not add or clarify the regulation to help with compliance.</td>
</tr>
<tr>
<td>175</td>
<td>Sufficient records must be kept of these</td>
<td>No change</td>
<td>Retain ACOP</td>
<td>PUWER regs are too general for</td>
</tr>
<tr>
<td>10(1)/11(1)</td>
<td>examinations and tests to enable radiation employers to identify which controls, features or devices have been examined or tested, what action is required to maintain them and when the next examination or test is due.</td>
<td>this to be deleted. Also, need to avoid end user having to go to alternative regs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>181 Reg 11(1)/12(1)</td>
<td>Assessments of effective dose and equivalent dose from external radiation for the purpose of comparison with the dose limits specified in Schedule 4 of the Regulations should be made using the values and relationships in Annex II of Council Directive 96/29/Euratom³.</td>
<td>Retain ACOP</td>
<td>Any move to delete this and rely on the definition provided by the Directive would restrict the services that measure dose to using agreed methodologies and not offer flexibility as to innovative approaches to calculate dose where the agreed methodologies may not be suitable.</td>
<td></td>
</tr>
<tr>
<td>182 Reg 11(1)/12(1)</td>
<td>Assessments of committed effective dose and committed equivalent dose following intakes of radionuclides into the body should take account of the dose likely to accrue over a period of 50 years following the intake (up to age 70 for children) and should be attributed to the calendar year of the intake for the purpose of comparison with dose limits.</td>
<td>No change</td>
<td>Timescales are set out within the definition of committed effective dose – however enforcement action cannot be taken against a definition so retention of this paragraph allows this.</td>
<td></td>
</tr>
<tr>
<td>183 Reg 11(1)/12(1)</td>
<td>For the assessment of compliance with the dose limits relating to members of the public, realistic estimates should be made of the average effective dose (and where relevant equivalent dose) to representative members of the appropriate reference group for the expected pathways of exposure.</td>
<td>No ACOP required</td>
<td>Full deletion – move text to regulations to meet new requirement</td>
<td>This is a new requirement of BSSD.</td>
</tr>
</tbody>
</table>

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95
<table>
<thead>
<tr>
<th>Regulation</th>
<th>Text</th>
<th>Action</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg 13(1)-(3)/14(1)-(3)</td>
<td>To be suitable, a radiation protection adviser will need to possess the specific knowledge, experience and competence required for giving advice on the particular working conditions or circumstances for which the employer is making the appointment.</td>
<td>No ACOP required</td>
<td>This text will be covered in guidance, and it is also to additive to the management regulations. Additionally, the definition of a radiation protection adviser which will be in the regulations means that it is inherent that these qualities are met.</td>
</tr>
<tr>
<td>217 Reg 13(1)-(3)/14(1)-(3)</td>
<td>In addition to the specific matters set out in Schedule 5, radiation employers must consult a radiation protection adviser where advice is necessary for the observance of the Regulations. This should normally include: a) the risk assessment required by regulation 7; b) the designation of controlled and supervised areas as required by regulation 16, except where there is good reason to consider that such areas are not required, for example based on advice from the supplier of the radiation source or written guidance from an authoritative body; c) the handling of the various investigations required by the Regulations; d) the drawing up of contingency plans required by regulation 12; e) the dose assessment and recording required by regulation 21; and f) the quality assurance programme in respect of medical equipment or apparatus required by</td>
<td>No change</td>
<td>Legal advice has suggested that this should be kept as ACOP to support the Directive.</td>
</tr>
<tr>
<td>Regulation</td>
<td>Description</td>
<td>ACOP Requirement</td>
<td>Notes</td>
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<tr>
<td>232 Reg 13(4)/14(4)</td>
<td>Radiation employers who need advice in relation to plans for off-site emergencies should provide, or may arrange to share, a specialised radiation protection unit. Such units should be distinct from production and operational units and authorised to perform radiation protection tasks.</td>
<td>No ACOP required</td>
<td>Full deletion. IRR and REPPIR were not developed in parallel so this is now not needed in IRR.</td>
</tr>
<tr>
<td>248 Reg 16(1)/15(1)</td>
<td>Special procedures should always be necessary to restrict the possibility of significant exposure, and therefore employers should designate controlled areas, in cases where:</td>
<td>Employers must designate controlled areas, in cases where:</td>
<td>Retain as ACOP. The text supports the Articles of the Directive – however the 7.5 µSv rate is not specified in the Directive. Specialists advise that it would be a major change for industry if this were to be removed and it gives limits for dutyholders to aid designation.</td>
</tr>
<tr>
<td></td>
<td>(f) the external dose rate in the area exceeds 7.5 microsieverts per hour when averaged over the working day;</td>
<td>(a) the external dose rate in the area exceeds 7.5 microsieverts per hour;</td>
<td></td>
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<td></td>
<td>(g) the hands of an employee can enter an area and the 8-hour time average dose rate in that area exceeds 75 microsieverts per hour;</td>
<td>(b) the hands of an employee can enter an area and the dose rate in that area exceeds 75 microsieverts per hour;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h) there is a significant risk of spreading radioactive contamination outside the working area;</td>
<td>(c) there is a risk of spreading significant radioactive contamination outside the working area;</td>
<td></td>
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<tr>
<td></td>
<td>(i) it is necessary to prevent, or closely supervise, access to the area by employees who are unconnected with the work with ionising radiation while that work is under way; or</td>
<td>(d) it is necessary to prevent, or closely supervise, access to the area by employees who are unconnected with the work with ionising radiation and other processes while that</td>
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<td></td>
<td>(j) employees are liable to work in the area for a period sufficient to receive an effective dose in</td>
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<tr>
<td>excess of 6 millisieverts a year.</td>
<td>work is under way; or employees are liable to work in the area for a period sufficient to receive an effective dose in excess of 6 millisieverts a year.; or employees untrained in radiation protection are likely to enter that area, unless the only work with radiation involves a radioactive substance dispersed in a human body, where the dose rate exceeds 7.5 microsieverts per hour</td>
<td></td>
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</tbody>
</table>

| (e) | (f) |

| In addition, an area should be designated as a controlled area if the dose rate (averaged over a minute) exceeds 7.5 microsieverts per hour and: |

| (c) | (d) |

| the work being undertaken is site radiography; or employees untrained in radiation protection are likely to enter that area, unless the only work with ionising radiation involves a radioactive substance dispersed in a human body and none of the conditions in the previous paragraph apply. |

| In this context, site radiography means any radiography of inanimate objects other than that which is carried out in an enclosure or cabinet that restricts the dose rate (averaged over a minute) outside the enclosure to 7.5 microsieverts per hour. |

| No ACOP required | Delete and move part of this to 248 (above) |

<p>| 249 Reg 16(1)/17(1) | This majority of this paragraph is unnecessary now with the exception of (b) which overlaps with the paragraph above so can be rolled into this. |</p>
<table>
<thead>
<tr>
<th></th>
<th>Written local rules must identify the key working instructions intended to restrict any exposure in that controlled or supervised area. The details given in these rules should be appropriate to the nature and degree of the risk of exposure to ionising radiations. The rules must cover work in normal circumstances and also the particular steps to be taken to control exposure in the event of a radiation accident, as set out in the contingency plan required by regulation 12. Local rules for a controlled area should include a summary of the arrangements for restricting access into that area, including the written arrangements covering those who are not classified persons.</th>
<th>No ACOP required</th>
<th>Full deletion move first sentence to regulation, rest to guidance</th>
<th>Full analysis of the regulation suggests that the first sentence should be moved to regulation in line with the Directive. The rest of the paragraph either replicates the regulation or is only appropriate for guidance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>339</td>
<td>For areas designated on the basis of external radiation, adequate monitoring must include measurement of dose rates (averaged over a suitable period if necessary). For areas designated on the basis of internal radiation, adequate monitoring should include measurements of air activity and surface contamination where appropriate, taking into account the physical and chemical states of the radioactive contamination. In either case, the monitoring must be sufficient to indicate whether levels of radiation and contamination are satisfactory for continuing work with ionising radiation.</td>
<td>No ACOP required</td>
<td>Full deletion final sentence to go into guidance, rest into regs to meet new requirement</td>
<td>Elements of this are consistent with the Directive and relevant text from the Directive will be placed in regulation to implement.</td>
</tr>
<tr>
<td>340</td>
<td>Monitoring should be designed to indicate breakdowns in controls or systems and to detect changes in radiation or contamination levels. In order to check the continued correct designation of areas, monitoring will be necessary both inside and outside</td>
<td>No change</td>
<td>Retain as ACOP</td>
<td>The text adds to the regulation and clarifies compliance.</td>
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<td>341 Reg 19(1)/20(1)</td>
<td>Employees carrying out the monitoring should be familiar with the proper use of the instruments and know how to interpret and record the results correctly.</td>
<td>No ACOP required</td>
<td>Full deletion move to guidance</td>
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<td>This is guidance rather than ACOP.</td>
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<tr>
<td>347 Reg 19(2)/20(2)</td>
<td>Monitoring instruments used for measuring external radiation should be suitable for the nature and quality of the radiation concerned. Instrumentation used for measurements of air activity and surface contamination should be suitable for the physical and chemical state of the radioactive materials present.</td>
<td>No ACOP required</td>
<td>Full deletion</td>
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<td>This will be partly covered by moving of ACOP para 339 to regulation and the rest is repetition of the regulation.</td>
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</tr>
<tr>
<td>348 Reg 19(2)/20(2)</td>
<td>Monitoring equipment should normally be tested and thoroughly examined at least once every year.</td>
<td>Text still to be clarified, suggested text: Monitoring equipment must be tested and thoroughly examined at least once every year, prior risk assessment (regulation 7) will help to determine if this is the correct frequency of retesting and examination</td>
<td>Retain as ACOP</td>
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<td></td>
<td>This text adds a timescale to the regulation However, equipment may require testing more or less. To take account of this it will be suggested that this should be determined by risk assessment and included in guidance in the relevant regulation.</td>
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</tr>
<tr>
<td>355 Reg 19(3)/20(3)</td>
<td>All instruments should be individually calibrated before first use and as part of the annual examination and test.</td>
<td>No ACOP required</td>
<td>Full deletion – move to guidance</td>
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<td>This is not in the Directive; suggest that this is placed in guidance).</td>
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<tr>
<td>Reg 19(3)/20(3)</td>
<td>Qualified persons should possess the necessary expertise in instrumentation, theory and practice appropriate to the type of instrument to be tested.</td>
<td>No ACOP required</td>
<td>Full deletion – move to guidance</td>
<td>This is does not add to the regulation or provide agreed methodology, move to guidance. The industry already has a certified competence scheme in place RPA 2000</td>
</tr>
<tr>
<td>Reg 19(4)/20(4)</td>
<td>Suitable monitoring records should include the date, time and place of monitoring and confirm that controlled and supervised areas are correctly designated and show where levels are being approached which may require investigatory or remedial action to be taken. For areas designated on the basis of external radiation there should be an indication of the nature and quality of the radiation in question. For areas designated on the basis of internal radiation the results should indicate the nature and physical and chemical states of radioactive contamination unless this is inappropriate.</td>
<td>No ACOP required</td>
<td>Full deletion Move first sentence to guidance. The text from the second sentence onwards will be escalated into regulation via copy out from the Directive.</td>
<td>The first sentence does not reflect the Directive and will be added to guidance as good practice, as how areas are designated is covered elsewhere. The second sentence onwards is a requirement of the Directive and will be moved to regulation.</td>
</tr>
<tr>
<td>363 Reg 19(4)/20(4)</td>
<td>Any records of instrument tests carried out for the purposes of regulations 19(2) and (3) should be signed by a qualified person. The name and contact details of that person should be stated in the record.</td>
<td>No change</td>
<td>Retain as ACOP</td>
<td>This would be expected to be made available on request to an inspector and by association also means that Para 356 of ACOP is not necessary as a qualified person is required to sign this off.</td>
</tr>
<tr>
<td>367 Reg 20(1)-(2)/21(1)-(2)</td>
<td>In deciding whether a person should be classified, the employer should take account of the potential for exposure to ionising radiation (including the possibility of accidents etc which are likely to occur)</td>
<td>No change</td>
<td>Retain as ACOP</td>
<td>This adds clarity to the regulation as to what exposure should be considered.</td>
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<tr>
<td>368 Reg 20 (1)-(2)/21(1)-(2)</td>
<td>as a result of the work the individual is required to undertake.</td>
<td>No change</td>
<td>Retain as ACOP – supplement guidance. This is included due to the likelihood of a potential exposure such as this happening on a nuclear site. This designation as a classified worker due to the potential of this occurrence should continue in ONRs opinion.</td>
<td></td>
</tr>
<tr>
<td>376 Reg 20(3)/21(3)</td>
<td>An employer should designate as a classified person any employee who works with any source of ionising radiation which is capable of giving rise to a dose rate such that it is reasonably foreseeable an employee could receive an effective dose greater than 20 millisieverts or an equivalent dose in excess of a dose limit within several minutes.</td>
<td>No change</td>
<td>Retain as ACOP – context needs to be explained. Clarifies what &quot;significant&quot; means in context of the regulation – possible rewording may help clarify; along the lines of exposure in a new post would still result in classification based on cumulative levels of exposure.</td>
<td></td>
</tr>
<tr>
<td>409 Reg 21(5)/22(5)</td>
<td>Exposure is significant if the employee is likely to receive an effective dose at a rate exceeding 1 millisievert per year as a result of work in the new post.</td>
<td>No change</td>
<td>Partial deletion - keep first sentence as ACOP, rewrite second sentence as guidance. This should be part of the suitable arrangements specified already within the regulations. As such, this would be repetition.</td>
<td></td>
</tr>
</tbody>
</table>
| 415 Reg 22(1)-(2)/23(1)-(2) | The employer's investigation should take account of the following where relevant:  
(e) details of the pattern of work of the individual such as the time spent in particular controlled and supervised areas;  
(f) measurements from any additional dosemeter or direct reading device worn by the person concerned;  
(g) individual measurements made on other employees carrying out the same work with ionising radiations; and  
(h) the results of monitoring for controlled and supervised areas carried out in accordance with regulation 19. | No ACOP required | Full deletion  Move to guidance | Paragraph is not a definitive list of measures to be assessed, so should be moved to guidance. This can be combined with paragraph 421. |
| 420 Reg 23(3)-(8)/24(3)-(8) | An estimate of the dose received should be regarded as much greater than or much less than the original entry in the dose record for a particular period if:  
(d) the dose received differs from the original entry in the dose record by at least 1 millisievert for recorded doses of 1 millisievert or less; or  
(e) the dose received differs from the original entry in the dose record by a factor of 2 or more for recorded doses in excess of 1 millisievert but less than the relevant dose limit; or  
An estimate of the dose received should be regarded as much greater than or much less than the original entry in the dose record for a particular period, if:  
(a) for recorded doses of 1 millisievert or less the dose received differs from the original entry in the dose record by at least 1 millisievert; or | Retain ACOP | This is not covered in the BSSD. Specialists are redrafting as this paragraph is not well understood. This could be used in enforcement action. |
(f) the dose received differs from the original entry in the dose record by a factor of 1.5 or more for recorded doses above the relevant dose limit.

(b) for recorded doses in excess of 1 millisievert but less than the relevant dose limit the dose received differs from the original entry in the dose record by a factor of 2 or more or for recorded doses above the relevant dose limit the dose received differs from the original entry in the dose record by a factor of 1.5 or more

(c) The employer’s investigation into the circumstances of the exposure should take account of:

(a) relevant information provided by the approved dosimetry service;

(b) details of the pattern of work of the individual such as the time spent in particular controlled and supervised areas;

(c) measurements from any additional dosemeter or direct reading device worn by the person concerned;

(d) individual measurements made on other employees carrying out the same work with ionising radiations; and

(e) the results of monitoring for controlled and supervised areas carried out in accordance with

No ACOP required

Full Deletion – move to guidance

This does not provide a comprehensive list of what should be taken account of in the investigation by the dutyholder, so does not provide clear direction on what to do to comply. This can be combined with paragraph 421 in guidance.
<table>
<thead>
<tr>
<th>Regulation</th>
<th>Text</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 422 Reg 23(3)-(8)/24(3)-(8) | The information used to estimate the dose received will be adequate if it:  
(c) shows that there is reasonable cause to believe that the dose received by the classified person was much greater than or much less than the dose recorded in the dose record; and  
(d) includes sufficient information to permit a reliable reconstruction of the exposure conditions for the person during the relevant dose assessment period.  
The investigation report should at least include the information in (a) and (b). | No ACOP required | Full Deletion  
move to guidance.  
The text gives an outline but no detail on some of the terminology used so the dutyholder is unable to know if they will be compliant. This also overlaps with Para 420 which is being retained so is not necessary. |
| 446 Reg 24(2)/25(2) | Adequate medical surveillance should include:  
(f) a medical examination before first being designated as a classified person in a post involving work with ionising radiations;  
(g) periodic reviews of health at least once every year;  
(h) special medical surveillance of an employee when a relevant dose limit has been exceeded;  
(i) determining whether specific conditions are necessary; and  
(j) a review of health after cessation of work where this is necessary to safeguard the health of the | No ACOP required | Full deletion  
To comply with the Directive, all of this text now moves to regulation |
<table>
<thead>
<tr>
<th></th>
<th>Individual.</th>
<th>No ACOP required</th>
<th>Full Deletion</th>
<th>Full Deletion</th>
<th>Partial Deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>447 Reg 24(2)/25(2)</td>
<td>The nature of the medical surveillance for each individual should take account of the nature of the work with ionising radiation and that individual's state of health.</td>
<td>No ACOP required</td>
<td>Full deletion</td>
<td>This is now a requirement of the Directive, so the paragraph moves to regulation.</td>
<td></td>
</tr>
<tr>
<td>448 Reg 24(2)/25(2)</td>
<td>Medical surveillance carried out following an investigation under regulation 25 should include a special medical examination of the individual if that person has received an effective dose of ionising radiation in excess of 100 millisieverts in a year or an equivalent dose of at least twice any relevant annual dose limit.</td>
<td>No ACOP required</td>
<td>Full Deletion</td>
<td>This ACOP is not required due to the previous ACOP paragraph 446 being moved to regulation. This will require surveillance when a dose limit is exceeded so further clarification with respect to an overexposure is not necessary as this will be carried out anyway.</td>
<td></td>
</tr>
<tr>
<td>466 Reg 24(7)-(8)/25(7)-(8)</td>
<td>The records made available to the appointed doctor or employment medical adviser before the periodic review of health is carried out should always include any relevant records of sickness absence for the person as well as the health record and copies of the summaries of the dose record provided by the approved dosimetry service and retained in accordance with regulation 21 (7).</td>
<td>No ACOP required</td>
<td>Full deletion</td>
<td>The text is too similar to the regulation with the exception of “relevant records of sickness absence” which can be inferred as a record that an Appointed Doctor may reasonably require. Guidance infers this is seen automatically so suggest that this text is moved to guidance as it seems to be captured already.</td>
<td></td>
</tr>
<tr>
<td>483 Reg 27(3)/28(3)</td>
<td>The purpose of a leak test is to show that the mechanisms for preventing dispersal of radioactive substances are functioning as intended. The assessment required by regulation 7 should identify potential ways in which containment could be lost under normal operating conditions, the interval between tests should not exceed two years.</td>
<td>Where testing is appropriate</td>
<td>Partial deletion</td>
<td>The first sentence of the paragraph is not ACOP and seems to define a leak test so can be placed in guidance. The rest of the text, apart from the final sentence adds little</td>
<td></td>
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</table>
and their likelihood of occurring. A test method and a
frequency of testing should then be chosen that is
capable of detecting leakage of radioactivity from the
source or article before a radiation risk arises. Where
testing is appropriate under normal operating
conditions, the interval between tests should not
exceed two years.

<p>| 493 | Reg 28/29 | The procedures for accounting should ensure that the location of radioactive substances is known and, as a consequence, losses of significant quantities can quickly be identified. A frequency for checking the location of the source should be determined, taking account of the likely movement of the source, its potential for being displaced and its susceptibility to damage. For portable sources, such as radiography sources and portable gauges, the check should be at least on each working day. | Retain as ACOP – text added to reflect theft | This clarifies the regulation – specialists have asked, (based on regulatory experience), to include theft in the accounting requirements |
| 494 | Reg 28/29 | Other examples of intervals at which the location of a source should be updated are: | No ACOP required | Full deletion move to guidance | The text gives examples of circumstances which are not exhaustive so do not clarify the |</p>
<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>522 Reg 31(2)/32(2)</td>
<td>It is appropriate to carry out a critical examination if there may be radiation protection implications arising from the way in which an article is being or has been erected or installed.</td>
<td>No ACOP required</td>
</tr>
<tr>
<td>523 Reg 31(2)/32(2)</td>
<td>Matters on which the radiation protection adviser should be consulted include the plans for installing the equipment, the nature and extent of any tests undertaken as part of the critical examination and the acceptability of any test results.</td>
<td>No ACOP required</td>
</tr>
</tbody>
</table>
| 538 Reg 32(3)-(4)/33(3)-(4) | A suitable quality assurance programme establishes those planned and systematic actions necessary to provide adequate confidence that equipment will satisfy the requirements of regulation 32(1). The extent of the programme will depend on the nature and range of equipment in use. In drawing up a quality assurance programme make it clear:  
  - who has responsibility for organising the various elements,  
  - who will carry out testing or dose assessment and | Depends on Department of Health (DH) proposal to have Reg 32 vires. If remains with HSE re - write with DH agreement. | Under review with Department of Health |
<table>
<thead>
<tr>
<th>539 Reg 32(3)-(4)/33(3)-(4)</th>
<th>The programme should specify the frequency of any testing (and other measurements) and appropriate action levels for equipment or apparatus which is subject to periodic testing. If these levels are found to have been exceeded the employer should assess what remedial action is needed, including removal from service where necessary, taking into account the risk arising from its continued use for specified purposes. In establishing these levels, the employer should take into account guidance established by relevant professional bodies about criteria of acceptability for such equipment.</th>
<th>Depends on Department of Health (DH) proposal to have Reg 32 vires. If remains with HSE re-write with DH agreement.</th>
<th>Under review with Department of Health</th>
</tr>
</thead>
</table>
| 540 Reg 32(3)-(4)/33(3)-(4) | In devising a suitable quality assurance programme for equipment, employers should give special attention to equipment used for medical exposure:  
- of children;  
- as part of a health screening programme;  
- involving high doses to the patient such as interventional radiology, computed tomography or radiotherapy. | Depends on Department of Health (DH) proposal to have Reg 32 vires. If remains with HSE re-write with DH agreement. | Under review with Department of Health |
Title: The Health and Safety (Miscellaneous Amendments and Repeal) Regulations 2017

Sponsor: David Snowball

FOR DECISION

The HSE Board is invited to:

- Agree to recommend to the Minister for Disabled People, Health and Work that the Health and Safety (Miscellaneous Amendments and Repeal) Regulations 2017 are implemented on 6 April 2017.

KEY INFORMATION

1. In March 2016, and subsequently in November 2016, the Regulation Committee agreed that HSE should implement the Health and Safety (Miscellaneous Amendments and Repeal) Regulations.

2. This single instrument incorporates amendments to seven sets of existing HSE regulations. These are technical amendments that have been identified across different HSE sectors over the past two years and need to be implemented as soon as possible to clarify, simplify or correct the existing regulations. It is normal practice for government departments to periodically make miscellaneous amendments and there is nothing unusual about this set of amendments. More detail is provided at Annex 1.

3. HSE has also agreed to support Northern Ireland’s transposition of Directive 2013/30/EU on the safety of offshore oil and gas operations (Offshore Directive) by making an amendment to the Offshore Installations (Safety Zones) Regulations 1987.

4. Subject to the Board’s approval, HSE will submit the proposal to implement these draft Regulations (see Annex 2) to the Minister for Disabled People, Health and Work in January 2017, and initiate the write round to seek collective agreement in February 2017. The Regulations will come into force in April 2017.

FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES

5. The respective sets of regulations, at the time of making, were subject to the appropriate policy clearances, including impact assessment scrutiny by RPC, consultation and collective agreement. There are no costs associated with the amendments to these regulations and they do not qualify for ‘One-In-Three-Out’ or affect the Business Impact Target.
6. If the Control of Major Accident Hazards Regulations 2015 (COMAH) are not amended, their scope will remain wider than that of the Directive. This can be handled operationally using the transitional provisions of the Regulations until 1 June 2017 but beyond that date a legal resolution is required. The amendment will fulfil the domestic intentions when introducing COMAH 2015 and will also be welcomed by the industry and stakeholders affected.

7. The amendment to the Offshore Installations (Safety Zones) Regulations 1987 will allow Northern Ireland (and consequently the UK) to fully transpose the Offshore Safety Directive. Northern Ireland has no powers to introduce safety zones regulations and is relying on HSE to implement this single provision.

**HANDLING AND COMMUNICATIONS**

8. The miscellaneous amendments are mainly technical legal changes and are not controversial. No proactive communications are planned but amendments will be signposted from the respective sector webpages.

9. The devolved administrations in Scotland and Wales were consulted when the respective regulations were made and there are no implications on devolved administrations from these amendments.

10. For the COMAH amendments, an enforcement position will address how the Competent Authority will handle COMAH application prior to a legal solution coming into effect. Guidance and FAQs for businesses impacted by the amendments will also be produced, in consultation with key stakeholders.
Annex 1: The Health and Safety (Miscellaneous Amendments and Repeals) Regulations 2017

This Statutory Instrument includes amendments to seven sets of HSE regulations. Most of these are technical legal amendments that correct, simplify or clarify requirements. Brief descriptions of these amendments, and why they are necessary, are provided below:

- **Explosives Act 1875:** A repeal provision relating to two sections of the Explosives Act 1875 (EA 1875) is included. These are legal corrections to reinstate the substance of the law as it stood before the Explosives Regulations 2014. The first correction addresses labelling requirements on the outer packing of explosives, which are considered no longer to be necessary in the light of changes to subsequent legislation. The second correction addresses a method for the Secretary of State to seek to change Acts, charters and customs in relation to explosives which is an outdated method for amending the law. The amendments appeared in earlier legislation, the Manufacture and Storage of Explosives Regulations 2005 (MSER 2005). MSER 2005 was, however, completely revoked by the Explosives Regulations (ER) 2014 without this repeal provision being protected. As the repeal had not taken effect before the revocation of MSER 2005, this means that the two sections remain law and will continue to be unless the repeal is reinstated.

- **Natural Environment and Rural Communities Act 2006:** Under section 43 a person is guilty of an offence if they have in their possession a pesticide containing a prescribed ingredient. It is, however, a defence for a person to prove that they possessed the pesticide in accordance with relevant pesticides legislation. The amendment updates the reference in the defence, to ensure that it is accurate following a change to the relevant pesticides legislation. That is, reference to the Plant Protection Products Regulations 2005 is replaced by reference to Regulation (EC) No 1107/2009. This consequential amendment was not picked up at the time of implementing the change.

- **The Offshore Installations (Safety Zones) Regulations 1987:** This amendment applies in Northern Ireland (NI) only. It adds one extra provision to the safety zones regulations whereby the installation operator or owner can give their consent for a vessel to enter the installation’s safety zone. This is a requirement of the Offshore Directive. NI is implementing the Offshore Installations (Offshore Directive) (Safety Case etc.) Regulations (Northern Ireland) 2016 to transpose the Offshore Directive requirements but does not have the powers to make safety zones regulations. HSE is therefore making this amendment on behalf of NI.

- **The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR):** This amendment will align reporting timescales for offshore dangerous occurrences under RIDDOR, the Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996 (DCR) and EU Reporting Regulation ((EU) No 112/2014). Offshore incidents may be reportable under each of these regulations/requirements with the possibility for multiple reports arising out of the same incident. When HSE
transposed the Offshore Directive, it intended to align the reporting timescales for all offshore dangerous occurrences to 10 working days. This was achieved by amending RIDDOR so an incident reportable under more than one requirement can be submitted on one form to the same timescale – 10 working days. Due to an oversight the amendment did not include a small number of incidents classified under the EU Reporting Regulation or DCR. This amendment will align the timescales as originally intended.

- **Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015**: This clarifies that production installations that have not commenced drilling or extracting petroleum are excluded from the requirement for combined operations notifications. This is a simple legal clarification.

- **Control of Major Accident Hazards Regulations 2015 (COMAH)**: This corrects an unintended flaw in COMAH relating to the scope of Seveso III with respect to transport of dangerous substances and directly related intermediate temporary storage, and transport of dangerous substances in pipelines. There is also a minor amendment to the definition of storage to remove a circular reference. The specific approach to handling the amendment was agreed by the Regulation Committee in August 2016.

- **Dangerous Goods in Harbour Areas Regulations 2016**: This clarifies the intention of the regulations to apply to harbour areas within the territorial seas adjacent to Great Britain, as well as to harbour areas within Great Britain. This corrects a technical drafting error that has been identified and will remove any ambiguity over the application of the regulations.
The Health and Safety (Miscellaneous Amendments and Repeal) Regulations 2017

Made - - - -
Laid before Parliament
Coming into force 6th April 2017

The Secretary of State is a Minister designated for the purposes of section 2(2) of the European Communities Act 1972(1) in relation to measures relating to the prevention and limitation of the effects of accidents involving dangerous substances(2) and measures in the veterinary and phytosanitary fields for the protection of public health(3).

The Secretary of State makes these regulations in exercise of the powers conferred by—

(a) section 2(2) of the European Communities Act 1972(4);
(b) sections 15(1), (2), (3)(a), (8) [and 82(3)(a)] of, and paragraph 15(1) of Schedule 3 to, the Health and Safety at Work etc. Act 1974(5); and
(c) section 23(1)(b) of the Petroleum Act 1987(6).

The Secretary of State makes these Regulations, so far as made in exercise of the powers cited in paragraph (b), for the purpose of giving effect without modifications to proposals submitted to him by the Health and Safety Executive under section 11(3)(7) of the Health and Safety at Work etc. Act 1974 after the carrying out of consultations by the Executive in accordance with section 50(3)(8) of that Act.

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(1) 1972 c. 68. Section 2(2) was amended by section 27 of the Legislative and Regulatory Reform Act 2006 (c. 51) and section 3 of, and Part 1 of the Schedule to, the European Union (Amendment) Act 2008 (c. 7).
(2) S.I. 1998/1750.
(3) S.I. 1999/2027. The Secretary of State is also designated in relation to anything supplemental or related to measures in the veterinary and phytosanitary fields for the protection of public health, under article 2(2) of that Order.
(4) Paragraph 1A of Schedule 2 was inserted by section 28 of the Legislative and Regulatory Reform Act 2006 (c. 51).
(5) 1974 c.37. Section 15(1) was substituted by paragraph 6 of Schedule 15 to the Employment Protection Act 1975 (c. 71) and amended by S.I. 2002/794. Section 15(2) was amended by paragraph 1 of Schedule 12 to the Energy Act 2013 (c. 32). Section 15(4)(a) was amended by S.I. 2008/960. Section 15(6)(d) was amended by Schedule 12 to the Criminal Law Act 1977 (c. 45). The general purposes of Part 1 of the 1974 Act are modified by section 1(1) of the Offshore Safety Act 1992.
(6) 1987 c. 12. Section 21 of that Act, which provides for the automatic creation of safety zones, was amended by paragraph 4 of Schedule 1 to the Energy Act 2008 (c. 32). Section 23(1) creates a prohibition on a vessel’s entering or remaining in a safety zone. There is an amendment to subsection (1)(b) of that section not relevant to Northern Ireland, in respect of which jurisdiction this power is invoked. Section 23(8), which defines “vessel,” was amended by the Merchant Shipping Act 1995 (c. 21), Schedule 13, paragraph 78.
(7) Section 11 was substituted by article 5 of S.I. 2008/960.
(8) Section 50(3) was amended by paragraph 16(3) of Schedule 15 to the Employment Protection Act 1975 (c. 71), paragraphs 4 and 6 of Schedule 7 to the Health and Social Care Act 2012 (c. 7), paragraph 11 of Schedule 12 to the Energy Act 2013 (c. 32), and S.I. 2008/960.
PART 1

General

Citation, commencement and extent

2.—(1) These Regulations may be cited as the Health and Safety (Miscellaneous Amendments and Repeal) Regulations 2017.

(2) These Regulations come into force on 6th April 2017, except for regulation 4 which comes into force with the coming into force of the repeal of section 32 of the Explosives Act 1875(9) by the Fireworks Act 2003(10).

(3) These Regulations extend to England and Wales, and Scotland, except for regulation 6 which extends only to Northern Ireland.

Review

3. [Confirm whether need to review these regulations themselves.]

PART 2

Miscellaneous Amendment to and Repeal of Primary Legislation

Explosives Act 1875 [powers: 15(1), (3)(a) HSWA]

4. Sections 40(8) and 103 of the Explosives Act 1875 are repealed.

Natural Environment and Rural Communities Act 2006 [powers: 2(2) ECA 1972, but not ambulatory power, DO S.I. 1999/2027.]

5.—(1) The Natural Environment and Rural Communities Act 2006(11) is amended as follows.

(2) In section 43 (possession of pesticides harmful to wildlife), in subsection (3), for paragraph (d) substitute—


PART 3

Miscellaneous Amendments to Secondary Legislation and Transitional Provision

Offshore Installations (Safety Zones) Regulations 1987 [powers: s 23(1)(b) PA 1987]

6.—(1) The Offshore Installations (Safety Zones) Regulations 1987(12) are amended as follows.

(2) In regulation 2 (prohibition on the entry into or remaining of a vessel in a zone: exceptions)—

(a) in paragraph (e) omit “or”;

(b) at the end of paragraph (f) insert “or”; and

(c) at the end insert—

“(g) if there is consent from the duty holder (as “duty holder” is defined in regulation [2(1)] of [the Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations (Northern Ireland) 2016][fn].)”

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(9) 1875 c. 17 (38 and 39 Vict.).
(10) 2003 c. 22.
(11) 2006 c. 16. Paragraph (c) of subsection (3) was substituted by S.I. 2013/1506, paragraph 2, Part 1, Schedule 5.
(12) These regulations were revoked, in relation to Great Britain only, by S.I. 2015/398, subject to transitional and saving provisions in respect of external waters; see regulation 4(3) of, and Part 2 of Schedule 13 and Part 2 of Schedule 14 to, S.I. 2015/398.
Official Sensitive

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 [powers: s 15(1), (2), para 15(1) Schedule 3 HSWA]

7.—(1) The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013(13) are amended as follows.

(2) In regulation 2(1) (interpretation), at the appropriate place insert—

“‘working day’ means any day other than a Saturday, a Sunday, Christmas Day, Good Friday or a day which is a bank holiday under the Banking and Financial Dealings Act 1971 in any part of Great Britain;”.

(3) In regulation 15 (restriction on parallel requirements), after paragraph (4) insert—

“(5) Where the responsible person is under—

(a) a requirement to make a report under these Regulations; and—

(b) either or both—

(i) a requirement to make a report under the EU Reporting Regulation, other than one that may be satisfied by making a report under these regulations; and

(ii) a requirement to make a report under regulation 9 of the Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996 (reporting of danger to an installation) in respect of an installation in external waters, only one report is required if the conditions in paragraph (6) are met.

(6) The conditions referred to in paragraph (5) are—

(a) the facts giving rise to each requirement are identical;

(b) the information required to be provided by each requirement is provided; and

(c) the report is made within 10 working days.

(7) In this regulation “EU Reporting Regulation” means Commission Implementing Regulation (EU) No 1112/2014 of 13 October 2014 determining a common format for sharing of information on major hazard indicators by the operators and owners of offshore oil and gas installations and a common format for the publication of the information on major hazard indicators by the Member States.”

(4) In paragraph 1(4) of Schedule 1, omit paragraph (a) (together with the final “and”).

The Control of Major Accident Hazards Regulations 2015 [powers: s 2(2) HSWA DO S.I. 1998/1750]

8.—(1) The Control of Major Accident Hazards Regulations 2015(14) are amended as follows.

(2) In regulation 2 (interpretation), in paragraph (1)—

(a) omit the definition of “pipelines”; and

(b) for the definition of “storage” substitute—

“‘storage’ includes warehousing, depositing in safe custody or keeping in stock;”.

(3) In regulation 3 (application and exceptions), in paragraph (2) after sub-paragraph (c) insert—

“(ca) the transport of dangerous substances in pipelines, including associated apparatus, except where that activity takes place at a site which is an establishment despite that activity;

(cb) the transport of dangerous substances and directly related intermediate temporary storage by road, rail, internal waterways, sea or air, including loading and unloading and transport to and from another means of transport at docks, wharves or marshalling yards, except where that activity takes place at a site which is an establishment despite that activity.”

The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015 [powers: s 15(1) and (8) HSWA]

9.—(1) The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015(15) are amended as follows.

(13) [Add footnote]
(14) S.I. 2015/483, [amendments].
(2) In regulation 2(4) (construction of the expression “combined operation”)—
(a) for “another installation or installations” substitute “another such installation or other such installations”;
(b) in paragraph (a), for “another” substitute “the other”.

The Dangerous Goods in Harbour Areas Regulations 2016 [powers: s 15(1) and (8) HSWA]

10. In the Dangerous Goods in Harbour Areas Regulations 2016(16), for regulation 5(1) substitute—

“5.—(1) These Regulations apply to—
(a) every harbour area in Great Britain;
(b) premises or activities in any part of a harbour area in the territorial sea adjacent to Great Britain to which sections 1 to 59 and 80 to 82 of the Health and Safety at Work etc. Act 1974 apply under Articles 6 (but only to the extent it relates to monobuoys) and 11 of the Health and Safety at Work etc. Act (Application outside Great Britain) Order 2013(17) but not, except as provided in regulation 14, elsewhere.”

Transitional provision

11. The amendment made by regulation 7 of these Regulations to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 has effect only in relation to [facts][circumstances] giving rise to the requirements to make reports, referred to in regulation 15(5) of those Regulations as amended, which occur on or after [6th April 2017][coming into force date of regulation 7].

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations make amendments to primary and secondary legislation relating to health and safety using powers under the Health and Safety at Work etc. Act 1974 and, as respects the Natural Environment and Rural Communities Act 2006, the European Communities Act 1972. The amendments include the repeal of primary legislation (see the next paragraph).

[EA 1875] Regulation 4 repeals provisions of the Explosives Act 1875. This re-instates a repeal which had been included in the Manufacture and Storage of Explosives Regulations 2005 (S.I. 2005/1082) but which had yet to be commenced before the revocation of those Regulations by the Explosives Regulations 2014 (S.I. 2014/1638).

Regulation 5 amends the Natural Environment and Rural Communities Act 2006 [to be provided]

Regulation 6 extends only to Northern Ireland. It amends the Offshore Installations (Safety Zones) Regulations 1987, which apply only in Northern Ireland, to provide an exception to the prohibition under section 23(1) of the Petroleum Act 1987 on a vessel entering or remaining in a safety zone established around an installation, namely, when there is consent from the duty holder. The regulation implements in part Article 6(7)(g) of Directive 2013/30/EU on safety of offshore oil and gas operations and amending Directive 2004/35/EC (OJ No L 178, 28.06.13, p.66).

Regulation 7 makes an amendment to extend the time for making reports in relation to offshore dangerous occurrences under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. The period is extended to ten working days, when the dangerous occurrence to be reported arises out of facts which separately require a report under the EU Reporting Regulation (which is defined in paragraph (7))

(15) [Amendments]
(16) S.I. 2016/721.
(17) S.I. 2013/240.
and/or a report of danger to an installation under the Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996.

[COMAH] Regulation 8 makes amendments to the Control of Major Accident Hazards Regulations 2015. Paragraph (2) removes an unnecessary definition of “pipelines”, as well as amends the definition of “storage”. Paragraph (3) amends regulation 3 of those regulations (concerning application and exceptions) by including exceptions in relation to the transport of dangerous substances in pipelines where that activity takes place outside of an establishment, and also the transport of dangerous substances and directly related intermediate temporary storage where that activity takes place outside of an establishment.

Regulation 9 makes an amendment to the Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015 to clarify that production installations, the operation of which has not commenced, are not included in reckoning whether there is a combined operation under those regulations.

[DGHAR] Regulation 10 makes amendment to clarify that the Dangerous Goods in Harbour Areas Regulations 2016 apply to harbour areas within the territorial seas adjacent to Great Britain.

Regulation 12 makes transitional provision to ensure that the extension of the time for reporting certain dangerous occurrences under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (made by regulation 7) only applies to situations occurring on or after 6 April 2016.
Title: Outcome of second consultation on the proposal to introduce The Freight Containers (Safety Convention) Regulations 2017

Sponsor: Selvin Brown MBE, Director of Engagement and Policy Division

FOR DECISION

The HSE Board is invited to:

- Note the outcome of the consultation proposals to replace The Freight Containers (Safety Convention) Regulations 1984 [1984 Regulations] with a new, consolidated set of Regulations to be known as the Freight Container (Safety Convention) Regulations 2017 [2017 Regulations];
- Agree that HSE should continue the process to lay new regulations and supporting guidance, with a view to taking legal effect on 6 April 2017.

KEY INFORMATION

1. At its meeting on 7 September 2016 the Board agreed HSE should test revised proposals for introducing the 2017 Regulations by holding a second, limited public consultation.

2. The 2017 Regulations give effect to the amendments made to the International Convention for Safe Containers 1972 (CSC). As the UK ratified CSC in 1978, it must 'give effect' to the Convention in accordance with principles of international law. In order to do this the Regulations require updating in line with changes to CSC.

3. HSE ran the public consultation between 17 October and 14 November 2016. We received 4 responses from stakeholders from the container industry, including the trade union (TU) which raised objections during the first consultation in January 2016, which led to the revised arrangements.

4. The TU who objected to the original proposal now strongly supports the revised proposal because in their view the arrangements implementing the changes to the CSC are much clearer. There were some suggestions for minor editorial changes to the SI which HSE considered and where appropriate updated. HSE is now in a position to continue the process to lay the new regulations to take effect from 6 April 2017.

5. The devolved administrations have been informed of the outcome of the consultation and are happy for HSE to continue with the process to lay new regulations.
FINANCIAL IMPLICATIONS AND BUSINESS RISKS/OPPORTUNITIES

7. A final stage IA will be submitted to confirm the non-qualifying regulatory provision status and confirm the average annual costs to business.

HANDLING AND COMMUNICATIONS

8. With the Board’s permission, HSE will continue the process to lay new regulations to take effect on 6 April 2017. We will ask the Minister to initiate a write-round to the Economy and Industrial Strategy (Reducing Regulation) Subcommittee in January 2017 to seek permission to lay the Regulations in Parliament.

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