

**EXPLANATORY MEMORANDUM TO**  
**THE RADIATION (EMERGENCY PREPAREDNESS AND PUBLIC**  
**INFORMATION) REGULATIONS 2019**

**2019 No. 703**

**1. Introduction**

- 1.1 This explanatory memorandum has been prepared by the Department for Business, Energy and Industrial Strategy (BEIS) and is laid before Parliament by Command of Her Majesty.

**2. Purpose of the Instrument**

- 2.1 This Instrument will transpose the emergency preparedness and response elements of the Euratom Basic Safety Standards Directive (2013/59/Euratom) (the “Directive”) in relation to premises in which work with ionising radiation takes place by revoking and replacing the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPIR).
- 2.2 This Instrument will strengthen Great Britain’s emergency preparedness and response arrangements for radiological emergencies. It will improve public protection and reduce adverse consequences in the event of an emergency. The changes will deliver a consistent approach to radiation emergency preparedness and response across the civil nuclear, defence licensed and authorised nuclear, and radiological sectors.

**3. Matters of special interest to Parliament**

*Matters of special interest to the Joint Committee on Statutory Instruments*

- 3.1 None.

*Matters relevant to Standing Orders Nos. 83P and 83T of the Standing Orders of the House of Commons relating to Public Business (English Votes for English Laws)*

- 3.2 The territorial application of this Instrument includes Scotland and Wales.

**4. Extent and Territorial Application**

- 4.1 The territorial extent of this Instrument is England, Wales and Scotland.
- 4.2 The territorial application of this Instrument is England, Wales and Scotland.

**5. European Convention on Human Rights**

- 5.1 Parliamentary Under Secretary of State, Minister for Business, Energy and Industry, Richard Harrington MP has made the following statement regarding Human Rights:
- “In my view the provisions of The Radiation (Emergency Preparedness and Public Information) Regulations 2019 are compatible with the Convention rights.”

**6. Legislative Context**

- 6.1 The Instrument is made principally to transpose new requirements set out in the Directive. The Directive consolidates and updates five directives and a European

Commission recommendation, including the 1996 Basic Safety Standards Directive (Council Directive 96/29/Euratom<sup>1</sup>). The Directive incorporates subsequent publications from the International Commission on Radiological Protection, which were published in 2007<sup>2</sup>, and increases harmonisation between the Euratom regime and the International Basic Safety Standards issued by the International Atomic Energy Agency (IAEA)<sup>3</sup>.

- 6.2 The Directive sets out standards in respect of radiation protection in different areas, including in relation to workers (“occupational exposures”), the public (“public exposures”) medical and dental patients (“medical exposures”), as well as for nuclear emergency preparedness and response. Much of the Directive has already been implemented into UK legislation, including by means of the Ionising Radiations Regulations 2017<sup>4</sup>, the Ionising Radiations Regulations (Northern Ireland) 2017<sup>5</sup>, the Ionising Radiations (Medical Exposures) Regulations 2017<sup>6</sup>, the Ionising Radiation (Medical Exposures) Regulations (Northern Ireland) 2017<sup>7</sup>, the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2018<sup>8</sup> and the Ionising Radiation (Basic Safety Standards) (Miscellaneous Provisions) Regulations 2018<sup>9</sup>.
- 6.3 This Instrument only transposes the emergency preparedness and response elements of the Directive in relation to premises in which work with ionising radiation takes place. The Carriage of Dangerous Goods (Amendment) Regulations 2019, which were made on 12 March 2019, and which amend the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009<sup>10</sup> in order to transpose the radiological emergency preparedness and response requirements of the Directive in relation to the transport of radioactive materials in the UK by road, rail and inland waterway.
- 6.4 Although the Euratom Treaty does not apply to defence activities, the Ministry of Defence (MOD) has taken a policy decision to apply, where practicable, the Directive to defence activities. In general MOD is bound by health, safety and environmental protection requirements; however, in certain circumstances, including under this Instrument, exemptions may apply. Where an exemption or derogation does apply, MOD policy is to produce outcomes that are, so far as reasonably practicable, at least as good as those required by UK legislation. As such, this Instrument applies to defence premises in which work with ionising radiation takes place, subject to the modifications in regulation 25.
- 6.5 A Transposition Note is submitted with this Explanatory Memorandum.

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<sup>1</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1502202246211&uri=CELEX:31996L0029>

<sup>2</sup> <http://www.icrp.org/publication.asp?id=ICRP%20Publication%20103>

<sup>3</sup> [http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1578\\_web-57265295.pdf](http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1578_web-57265295.pdf)

<sup>4</sup> <http://www.legislation.gov.uk/uksi/2017/1075/contents/made>

<sup>5</sup> <http://www.legislation.gov.uk/nisr/2017/229/made>

<sup>6</sup> <http://www.legislation.gov.uk/uksi/2017/1322/made>

<sup>7</sup> <http://www.legislation.gov.uk/nisr/2018/17/contents/made>

<sup>8</sup> <http://www.legislation.gov.uk/id/uksi/2018/428>

<sup>9</sup> <http://www.legislation.gov.uk/uksi/2018/482/contents/made>

<sup>10</sup> S.I. 2009/1348.

## 7. Policy background

### *What is being done and why?*

- 7.1 The policy objective of the Instrument is to improve public protection standards in relation to potential emergency exposures to ionising radiation in respect of premises in which work with ionising radiation takes place. To do this we are revoking the existing regulations - REPPIR - and replacing them with new regulations which implement the requirements of the Directive.
- 7.2 The Instrument introduces a new definition of radiation emergency to reflect both the definition in the Directive and the latest International Atomic Energy Agency (IAEA) definition. This broadens the definition of radiation emergency to include serious adverse consequences to quality of life, property and the environment; the aim of expanding the definition to include non-health impacts is to shift the focus of planning from medical protective actions to a wider spread of protective actions. It also introduces the need to consider perceived risk.
- 7.3 The Instrument introduces a definition of emergency worker. This will include anyone identified in a plan with a role in providing direct assistance in an emergency. The Instrument will introduce a requirement for emergency workers who could be involved in an emergency response and exposed to radiation to receive appropriate information and training.
- 7.4 The Instrument introduces a consistent approach to assessing the full range of risks and their consequences. Operators will be required to identify all hazards that have the potential to cause a radiation emergency, and then evaluate the range of possible on and offsite consequences for a reflective range of all hazards identified. This Instrument also sets out a consistent approach to the means and outcomes required for assessing the on and offsite consequences - the key outcomes from this would then be provided in a simple consequences report to the local authority, with a recommended technical distance for the detailed emergency planning zone. The local authority will be able to use this information to be better able to develop and implement effective emergency response plans specific to the site.
- 7.5 The Instrument introduces a graded approach to planning that is site appropriate, proportionate and flexible to the risks identified in the hazard evaluation process. As part of identifying all hazards, sites will have to consider more likely, less severe emergencies, but also less likely more severe emergencies. The Directive requires planning for unforeseen emergencies; those emergencies of extremely low likelihood but high impact. The Instrument introduces outline planning zones, where appropriate, to plan for these unforeseen emergencies and reflects a commensurate approach to planning. It also introduces the ability to have pockets of detailed planning within outline planning zones where appropriate for the local area. A more complex site with more potential hazard would therefore have more planning proportionate to its potential risk, and a simpler site with less potential hazard would have less planning proportionate to its potential risk.
- 7.6 This Instrument maintains the requirement for an operator to have an onsite emergency plan, and the local authority to have an offsite emergency plan to cover any emergency planning areas. However, the offsite emergency plan may now include outline planning zones. Detailed planning arrangements remain being focused on having capabilities in place, maintained and ready to implement very quickly during an emergency. Outline planning, however, is about identifying at a high level where

appropriate capabilities could be obtained in a short timeframe to use, and where they may be required, rather than having the capabilities in place, maintained and ready to go. This is commensurate to the lower likelihood risk outline planning zones exist to mitigate.

- 7.7 The need for any detailed emergency planning zone or outline planning zone, and their extent, would take account of its potential risk and be commensurate to the site. The operator would recommend a technical distance for a detailed emergency planning zone to the local authority in the consequences report. The local authority would take this at face value and make any minor adjustments to the radial distance to take account of local factors such as not bisecting local communities. The local authority would then determine the final detailed emergency planning zone. Independent regulators – the Office for Nuclear Regulation (ONR) and Health and Safety Executive (HSE) – are responsible for oversight of these regulations and have a range of regulatory powers to ensure this process is robust and accurate.
- 7.8 Default outline planning zone distances for different categories of civil nuclear sites are set out in this Instrument. These categories and distances are based on scientific modelling and an IAEA best practice release scenario, along with other key factors such as practicability for the local authority, international best practice comparisons, cost / benefit justification, and the overriding need for commensurate planning effort given the extreme unlikelihood of an unforeseen event. These categories and distances, and the modelling that has underpinned them, have been verified with ONR. The Secretary of State and Chief Nuclear Inspector may both agree to a different distance for a site should equivalent analysis evidence that a different distance to those default distances is required. In addition, ONR will be responsible for determining any movement of a site between categories.
- 7.9 Scientific analysis has also been undertaken by the MOD for defence nuclear sites; the Secretary of State for Defence will specify the need for and extent of any outline planning zone for defence sites based on this and it will be reported as part of the consequence report. For radiological sector sites, the operator and local authority will discuss and agree the need for and extent of any outline planning zone on the basis of the results of the consistent consequences assessment approach undertaken and reported in the consequences report. These approaches to determine outline planning zones across each sector are therefore commensurate to the hazard potential of the different sectors covered by this Instrument. Each approach to outline planning has the standardised approach to hazard evaluation and consequences assessment that has been developed at its centre.
- 7.10 The Instrument strengthens the role of the lead local authority and places a requirement on other relevant local authorities and duty holders to coordinate their planning with the lead local authority to develop offsite emergency planning. This Instrument also introduces the requirement for employers to consult suitable radiation protection advisers in exercising their functions.
- 7.11 This Instrument requires the review of hazard evaluation and consequences assessments at least every three years, and for a review to be undertaken where there is a material change to the work with ionising radiation at the site. It also sets out a requirement to review and test emergency plans at least every three years. These provisions are comparable to those previously set out in REPPiR, but this Instrument also introduces a specific requirement to take account of lessons learned, e.g. from those tests or reviews, from an emergency, or from best practice developments. This

Instrument further allows for a local authority (and those participating in emergency exercises) to recover reasonable costs from an operator incurred fulfilling an emergency planning function under this Instrument.

- 7.12 This Instrument provides for emergency plans to be implemented without delay. It introduces a requirement for the operator and local authority to work together (where there is an offsite emergency plan) to produce a full assessment of the consequences should an emergency occur, and the effectiveness of the on and off-site emergency plans.
- 7.13 The Instrument introduces a national reference level of 100mSv. Reference levels are guidance tools to support emergency response efforts by optimising protection strategies to limit exposure and organising treatment of those subject to exposure of radiation. They complement existing planning tools such as emergency reference levels and maximum permitted levels. The national reference level is a target to keep below for an annual dose a person receives in a 12-month period following an emergency and the implementation of protective actions. Local authorities and the Secretary of State can also set reference levels in a radiation emergency if they wish.
- 7.14 This Instrument provides that where employees with specific roles in an emergency plan may exceed occupational exposure limits set out in the Ionising Radiation Regulations 2017, the dose limits for emergency workers may be disapplied in order to prevent the imminent occurrence of a radiation emergency, or mitigating the consequences where one has occurred.
- 7.15 The Instrument includes requirements for standardised information to be provided to the public, including prior information within planning zones. This enables local authorities to consider a co-ordinated approach to providing information. Local authorities will have a new duty to undertake prior information to local populations. This will be proactive in detailed emergency planning zones and on request in outline planning zones but with a requirement for transparency, making it commensurate to the risk. This Instrument also provides for all local authorities, regardless of whether they host a site captured by this Instrument, to pre-prepare information and supply it in the event there is a radiation emergency in their jurisdiction.
- 7.16 This Instrument enables MOD to exercise exemptions to the provisions within this Instrument by the Secretary of State issuing a certificate of exemption on the grounds of national security.
- 7.17 There will be a 12 month implementation period for duty holders under this Instrument to get in compliance with these new requirements. In exceptional circumstances, the regulator may grant an existing operator a 6 month extension to this period where they have complied with their obligations, and are awaiting a local authority to comply. This enables the operator to continue to operate.
- 7.18 This Instrument requires a review of its provisions to take place at least every five years from the date of implementation. Such a review requires the Secretary of State to publish a report setting out the objectives that the regulations intended to achieve, the extent to which those objectives have been met by the regulations, whether the objectives remain appropriate, and whether the objectives could be achieved by a less onerous regulatory provision.

## **8. European Union (Withdrawal) Act/Withdrawal of the United Kingdom from the European Union**

8.1 This Instrument does not relate to withdrawal from the European Union nor trigger the statement requirements under the European Union (Withdrawal) Act.

## **9. Consolidation**

9.1 The Department does not intend to consolidate the relevant legislation at this time.

## **10. Consultation outcome**

10.1 BEIS, MOD and HSE conducted a joint GB-wide public consultation on the proposals for transposing the emergency preparedness and response requirements in the Directive from 5 October to 15 November 2017 (six weeks). The consultation asked six questions regarding the proposed changes to legislation.

10.2 The Department received 71 consultation responses from professional bodies, industry associations, private and public sector organisations and from individual respondents from across GB.

10.3 There was broad support for the proposals from respondents. They noted that they were logical and kept GB in line with international standards and guidance. They welcomed a consistent approach across the civil nuclear, defence nuclear and radiological sectors. There were also requests for further detail on the mechanics of the proposals through definitions or guidance.

10.4 Responses received helped refine policy decisions. For example, respondents highlighted that if prior information for the public was the same in detailed and outline emergency planning zones, this could be disproportionate and lead to unintended consequences. As a result, prior information will be provided proactively to populations in the detailed emergency planning zones. Appropriate information would be available when requested by those in outline planning zones and there would be a requirement for planning zones to be shown on a local authority website for transparency; there will be no duty on local authorities to proactively provide prior information in an outline planning zone.

10.5 The full Government response to the consultation was published on 22 October 2018 and can be found here: <https://www.gov.uk/government/consultations/revISED-requirements-for-radiological-protection-emergency-preparedness-and-response>.

## **11. Guidance**

11.1 The development of a supporting Approved Code of Practice (ACOP) and additional guidance is being led by the ONR and HSE. This will provide further practical advice to duty holders on complying with the regulations. A working draft of the ACOP and guidance will be available when the regulations are laid in parliament; a public consultation will also be held shortly thereafter.

## **12. Impact**

12.1 The impact on business, charities or voluntary bodies falls within the de minimis assessment. It, and the costs chapter in the Government response to the public consultation, sets out £4.6 million year one additional costs to business and £1.7 million ongoing additional annual costs. These costs fall into the following areas: familiarisation; preparation of information for the local authority; engagements with the local authority; enhancing existing off-site planning capabilities; introducing off-

site planning capabilities at sites with no existing off-site plans; on-site planning; and testing and exercising.

- 12.2 The impact on the public sector of this Instrument is out of scope for the de minimis assessment. The costs chapter in the Government response to the public consultation, sets out £3.2 million year one additional costs to the public sector and £1.5 million ongoing additional annual costs. These costs fall into the same areas as set out above for costs to business.
- 12.3 An Impact Assessment has not been prepared for this Instrument because of the low level of impact. A de minimis assessment has been prepared and is available from BEIS' Better Regulation Unit.

### **13. Regulating small business**

- 13.1 The legislation applies to activities that are undertaken by small businesses. All businesses to whom the Instrument applies, regardless of size, will be required to familiarise themselves with these regulatory changes and get in compliance as appropriate in order to better protect the public and meet the requirements of the Directive. However, the overall impact on small businesses will be limited and familiarisation with the changes will be a one-off activity.

### **14. Monitoring & review**

- 14.1 The Regulations include a review clause and will be reviewed in line with government policy, i.e. before the fifth anniversary of the Regulations. The first report of this review is to be published before 22 May 2024.

### **15. Contact**

- 15.1 Jessica Linacre at the Department for Business, Energy and Industrial Strategy, telephone: 07557488230 or email: [Jessica.linacre@beis.gov.uk](mailto:Jessica.linacre@beis.gov.uk) can be contacted with any queries regarding the Instrument.
- 15.2 Graham Webber at the Department for Business, Energy and Industrial Strategy can confirm that this Explanatory Memorandum meets the required standard.
- 15.3 Richard Harrington at the Department for Business, Energy and Industrial Strategy can confirm that this Explanatory Memorandum meets the required standard.