

# IMPLEMENTATION OF THE BASIC SAFETY STANDARDS DIRECTIVE IN THE UK

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## Abstract

Implementation of the European Council BSS Directive 96/29/Euratom in the UK is not achieved through any one piece of legislation (though the majority of the provisions are implemented by the Ionising Radiations Regulations 1999) but by a mosaic of provisions, supported by codes of practice, non-statutory guidance and administrative arrangements. The paper describes some of the features of UK occupational radiation protection and the reason for the apparent differences between the UK and other EU Member States in their approach to agreeing the precise provisions of European legislation.

## Introduction

In the United Kingdom no single legal instrument gives effect to European Council Directive 96/29/Euratom (the 'BSS Directive', ref. 1) but several Acts and Regulations together, plus administrative arrangements, achieve implementation. The principal pieces of legislation are: the Ionising Radiations Regulations 1999 (IRR99) and Approved Code of Practice; the Radiation (Emergency Preparedness and Public Information) Regulations 2001; the Nuclear Installations Act 1965; the Medicines Act 1968 and the Medicines (Administration of Radioactive Substances) Regulations 1968 and associated Regulations and Orders; the Radioactive Substances Act 1993 and associated Regulations and Orders; the Food Safety Act 1990; the Environment Act 1995; the Food and Environment Protection Act 1985; and the Air Navigation Order 2000. Devolution has further complicated the picture in that Scotland and Wales, as well as Northern Ireland, in some cases must now make their own implementing legislation.

## The UK approach to statutory interpretation

The UK is well known, during negotiations on draft directives, for seeking to insert qualifying phrases such as 'as far as is reasonably practicable' and 'where appropriate' into texts where other Member States would be content with, or even wish to see, absolute requirements. Until the reason for this approach is understood, it may be seen as attempting to reduce the force or the level of standards and provisions. However, the reason why UK negotiators have to take this line is because our courts interpret the law as written and have no discretion to decide appropriateness unless it is inbuilt. This means that British courts adopt a strict literal approach to interpretation, unlike their counterparts in some other continental jurisdictions where courts (or competent authorities) can decide appropriateness even when the requirement is apparently an absolute without any exception. British judges would certainly not read in words such as 'as appropriate' where those were lacking. Our law has also developed on a case-by-case basis and strict adherence to precedent is a feature.

## Specific features of occupational radiation protection and enforcement

Some specific features of UK occupational radiation protection legislation and enforcement are:

- approved codes of practice and guidance;
- reasonably practicable;
- investigation levels;
- dose limits;
- criteria for recognition of approved dosimetry services and qualified experts;
- enforcement tools.

These are considered in more detail in the following paragraphs.

## *Approved Codes of Practice and guidance*

In the UK, a Code of Practice approved by the Health and Safety Commission, with the consent of the Secretary of State, has a special legal status. It gives practical advice on how to comply with the law and an employer who follows the advice will be doing enough to comply with the law (in respect of those specific matters on which the Code gives advice). Employers may use alternative methods to comply with the law

but, in that case, if they are prosecuted they will need to show that those other methods achieved the necessary compliance.

Non-statutory guidance often accompanies Regulations and Approved Codes of Practice (these days often in the same document, for convenience, as in the Approved Code of Practice supporting the Ionising Radiations Regulations 1999 (Work with ionising radiation – Approved Code of Practice and guidance, L121, ref. 2)). Following such guidance is not compulsory and employers are free to take other action. But employers who do follow the guidance on a specific legal requirement will normally be doing enough to comply with the law. Health and Safety Inspectors, who seek to secure compliance with the law, may refer to the guidance as illustrating good practice.

Much of HSE's non-statutory guidance is freely available through the Ionising Radiation page of the Health and Safety Executive's website (ref. 3).

### *Reasonably practicable*

Some legal provisions may impose a duty on an employer without qualification, that is one that must always be carried out without exception. Others may require an employer to carry out a precautionary action "so far as is reasonably practicable", or "where reasonably practicable". "Reasonably practicable" is a narrower term than "physically possible" and implies a computation between the degree of risk and the sacrifice (in terms of money, time or trouble) involved in the measures necessary to avert the risk. If it can be shown that there is a gross disproportion between them, the risk being insignificant in relation to the sacrifice, the person upon whom the duty is laid discharges the burden of proving that compliance was not reasonably practicable. The computation must have been done before the incident complained of.

The competent authority may publish guidance on what it considers to be "reasonably practicable". For example, regulation 8(1) of the Ionising Radiations Regulations 1999 requires a radiation employer to "take all necessary steps to restrict so far as is reasonably practicable the extent to which his employees and other persons are exposed to ionising radiation." and regulation 8(2) establishes a hierarchy of control measures for this purpose (firstly engineered means, then supporting systems of work and lastly personal protective equipment), also qualified by reasonable practicability. In relation to exposure controls, paragraph 88 of L121 (ref. 2) says "Normally, it should be reasonably practicable to design control units for x-ray generators (and, where appropriate, radioactive source containers) to prevent unintended and accidental exposure.". Similarly, in relation to warning devices, paragraph 101 says "Automatic warning devices should be reasonably practicable for most x-ray generators and some sealed sources."

### *Investigation levels*

The over-riding requirement of the Ionising Radiations Regulations 1999 is that employers must take all necessary steps to restrict, so far as is reasonably practicable, the extent to which their employees and other persons are exposed to ionising radiation. As part of this requirement employers must carry out an investigation when, for the first time in a year, an employee's effective dose reaches either the level specified in the Regulations (15 mSv) or a lower level specified by the employer as being more appropriate for their practice. The employer could select different investigation levels for different sites or different groups of employees, where appropriate.

The purpose of this provision is to trigger a review of working conditions, to ensure that exposure is being restricted as far as reasonably practicable. The duty to carry out the investigation is placed on the actual employer of the person whose recorded dose has exceeded the investigation level. In most cases this will be an employer who is working with ionising radiation (a "radiation employer"). However, the employer might be a contractor (eg a scaffolding contractor or a cleaning company) working on various sites occupied by radiation employers. The investigation might have to take account of work with ionising radiation undertaken at all these different sites throughout the calendar year. Employers may wish to have arrangements for reviewing any unusually high doses, reported in dose summaries for classified persons (category A workers) by an approved dosimetry service or for other people entering controlled areas under written arrangements. Such arrangements would provide an early warning that an employee's cumulative dose was approaching the investigation level and would allow the employer to take further measures to restrict exposure before a formal investigation became necessary.

### *Dose limits*

The limit on effective dose, in the Ionising Radiations Regulations 1999 (ref. 4), for any employee aged 18 years of age or above is 20 mSv in any calendar year. However, the Regulations recognise that there may be some cases where, because of the special nature of the work undertaken by an employee, it may not be practicable to comply with this annual dose limit. This situation may arise where there are skilled tasks that need to be undertaken by key specialist staff, including foreign nationals. Where the employer can demonstrate that this is the case, the employer may apply the special dose limit of 100 mSv in five years (and no more than 50 mSv in any single year) to a named employee. The choice of the five-year dose limit for any particular employee is subject to a number of preconditions (set out in Part 2 of Schedule 4 of the Regulations). These include:

- consultation with the radiation protection adviser (qualified expert) and with the affected employee(s) (and any appointed safety representatives);
- provision of information to the affected employee(s) and the approved dosimetry service; and
- giving prior notice to the Health and Safety Executive (HSE), which may (subject to appeal) over-ride the employer's decision and require the employer to revert to annual dose limitation for that employee.

Further conditions are imposed once the five-year dose limit has been applied to an employee, including:

- investigation of any suspected exposures exceeding 20 mSv in a calendar year and notify HSE (to check that the five-year dose limit will still be met);
- need to review whether five-year dose limit is still appropriate at least once every five years;
- restrictions on reversion to an annual dose limit for that employee; and
- recording and retention of the reasons for the five-year dose limit.

### *Approval of dosimetry services*

Employers who designate employees as classified persons (category A workers) need to engage approved dosimetry services to undertake any necessary dose assessments, to open and maintain dose records and to provide relevant information from those records. Dosimetry services are approved by HSE (or a body specified by HSE) for one or more of the following specific purposes:

- measurement and assessment of whole-body or part-body doses arising from external radiation (notably x-rays, gamma rays, beta particles or neutrons);
- assessment of doses from intakes of specified classes of radionuclides;
- assessment of doses following an accident or other incident;
- co-ordination of individual dose assessments by other approved services, making, maintaining and keeping dose records, and provision of summary information; and
- assessment and recording of emergency exposures under the Radiation (Emergency Preparedness and Public Information) Regulations 2001.

An organisation may hold certificates of approval for more than one of these functions. The aim of approval is to ensure, as far as possible, that doses are assessed on the basis of accepted national standards and that dose records bring together all such dose assessments, helping employers check that doses are being kept as low as reasonably practicable and dose limits are not exceeded. For this purpose, HSE has published criteria for approval that must be met by a dosimetry service seeking approval or wishing to remain approved. The criteria Requirements for the approval of dosimetry services under the Ionising Radiations Regulations 1999 are available from HSE (ref. 5).

### *Recognition of qualified experts*

Radiation protection advisers (RPAs) in the Ionising Radiations Regulations 1999 are the main "qualified experts" in UK legislation. Recognition of their capacity to act is in two parts: the competent authority sets criteria of core competence that all RPAs must meet, then there is a duty on the employer to consult and if appropriate appoint a suitable RPA. The criteria for recognition of RPAs is set out in the HSE Statement on radiation protection advisers (available on HSE's website, ref. 3). RPAs must demonstrate competence against a list that is based on the basic syllabus for qualified experts contained in Annex 1 of the EC Communication on Directive 96/29/Euratom (ref. 6).

### Enforcement tools

The ultimate purpose of the enforcing authorities is to ensure that duty holders manage and control risks effectively, thus preventing harm. The term 'enforcement' has a wide meaning and applies to all dealings between enforcing authorities and those on whom the law places duties (employers, the self-employed, employees and others).

Enforcement is distinct from civil claims for compensation and is not undertaken in all circumstances where civil claims may be pursued, nor to assist such claims. The enforcing authorities have a range of tools at their disposal in seeking to secure compliance with the law and to ensure a proportionate response to criminal offences. Inspectors may:

- offer duty holders information, and advice, both face to face and in writing. This may include warning a duty holder that in the opinion of the inspector, they are failing to comply with the law;
- where appropriate, serve:
  - Improvement Notices (these may require an employer to undertake certain improvements by a specified date, while permitting work to continue, and may be used to tackle significant safety problems that nevertheless are not life-threatening);
  - Prohibition Notices (a prohibition notice stops work in order to prevent serious personal injury. Information on improvement and prohibition notices should be made publicly available);
- issue formal cautions (a formal caution is a statement by an inspector, that is accepted in writing by the duty holder, that the duty holder has committed an offence for which there is a realistic prospect of conviction); and
- prosecute.

Giving information and advice, issuing improvement or prohibition notices and withdrawing or varying approvals, authorisations, licences or exemptions are the main means which inspectors use to achieve the broad aim of dealing with serious risks, securing compliance with health and safety law and preventing harm.

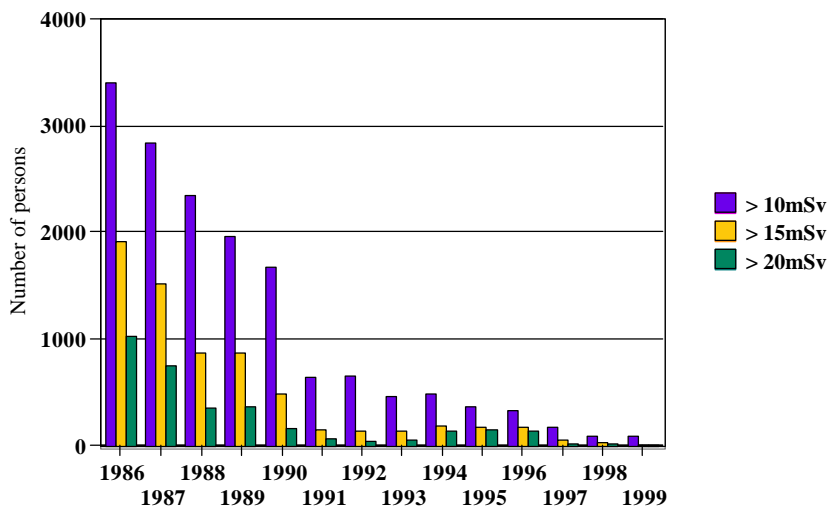
The UK's Health and Safety Commission (HSC), of which the Health and Safety Executive is its executive arm, has issued a Policy Statement on Enforcement. In summary, HSC believes in firm but fair enforcement of health and safety law. This should be informed by the principles of proportionality in applying the law and securing compliance; consistency of approach; targeting of enforcement action; transparency about how the regulator operates and what those regulated may expect; and accountability for the regulator's actions. The full Statement is available as a leaflet (HSC 15, ref. 7) or on the HSE website (ref. 3).

### Conclusion

Implementation of the BSS Directive in the UK is well founded, being based on legal provisions supported by statutory and non-statutory guidance, administrative arrangements, case law and compliance enforcement. Taken with the effect of the legislation implementing the 1980 BSS Directive (ref. 8), the approach has been shown to be effective in reducing exposure levels (Table 1).

**Table 1 Number of classified (category A) persons exceeding certain levels of dose**

(source: HSE's Central Index of Dose Information)



## References

1. Council Directive 96/29 Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation. *Official Journal of the European Communities* L159, 29.6.96, p. 1
2. Work with ionising radiation. Ionising Radiations Regulations 1999. Approved Code of Practice and guidance L121 HSE Books\* 2000 ISBN 0 7176 1746 7
3. HSE ionising radiation website - [www.hse.gov.uk/hthdir/noframes/iradiat.htm](http://www.hse.gov.uk/hthdir/noframes/iradiat.htm)
4. The Ionising Radiations Regulations 1999, SI 1999/3232. The Stationery Office
5. Requirements for the approval of dosimetry services under the Ionising Radiations Regulations 1999: Part 1 - External Radiations; Part 2 - Internal Radiations; Part 3 - Co-ordination and record keeping; Supplement on approval for emergency exposures during intervention. These are available from The Dosimetry Services Administrator, Health & Safety Executive, Physical Agents Unit, Magdalen House, Trinity Road, Bootle, Merseyside L20 3QZ Tel: 0151 951 4027; fax: 0151 951 4845; Email: [brian.kemble@hse.gov.uk](mailto:brian.kemble@hse.gov.uk)
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