



# Protection of outside workers against ionising radiation

## Ionising Radiation Protection Series No 4

### Introduction

This HSE information sheet is aimed at employers of outside workers, managers of contractors, health physics staff, appointed safety representatives, radiation protection advisers (RPA) and radiation protection supervisors (RPS), employers in control of controlled areas which outside workers may enter, and outside workers themselves.

This guidance supplements that in the Approved Code of Practice (ACOP) supporting the Ionising Radiations Regulations 1999 (IRR99) available from HSE Books, ISBN 0 7176 1746 7. IRR99 include provisions for outside workers that were previously required under the Ionising Radiations (Outside Workers) Regulations 1993 (OWR), which were revoked when IRR99 came into effect.

### When 'outside worker' provisions of IRR99 apply

These provisions apply when you are:

- a **classified person**, working for an employer or self-employed, and you are carrying out services in a controlled area set up by another employer;
- a **radiation employer**, and there are classified persons employed by other employers, including those based in Northern Ireland or other Member States of the EU, carrying out services in controlled areas you have set up. Under OWR you would have been known as 'the operator';
- an **employer**, and some of your employees who are classified persons work in controlled areas set up and controlled by other employers, either in Great Britain or in other places within the EU. Under OWR you would have been 'the outside undertaking'.

For example, an engineer who is a classified person works for a firm of maintenance contractors and goes into a controlled area in a hospital to service an accelerator. That engineer is then an outside worker and the outside worker provisions apply both to his employer and to the radiation employer who has control of the controlled area in which he carries out the service.

### When 'outside worker' provisions do not apply

The definition of an outside worker would not generally include a classified person who:

- enters another employer's controlled area merely as a visitor; or

- has individual contracts of employment with each radiation employer.

The outside worker provisions will not apply if, for example, an industrial radiographer brings a radioactive source onto another employer's site and creates a controlled area where one did not previously exist.

### Where to find provisions relating to outside workers in IRR99

The following regulations contain provisions relating to outside workers :

- **2(1)** - definitions of terms;
- **3(5)** - dose assessment, recording and medical surveillance arrangements of other Member States of the EU;
- **15** - co-operation between employers;
- **18(2) (b)** - access to controlled areas;
- **18(4)** - entries in radiation passbooks;
- **21(3) (h) and (i)** - issue of radiation passbooks;
- **21(5)** - updating radiation passbooks;
- **34(3)** - duty on outside workers;
- **36(4) and (5)** - defence in proceedings; and
- **39(4)** - transitional provisions.

### Radiation passbooks

Radiation passbooks (passbooks) are individually numbered documents which employers must obtain through an approved dosimetry service (ADS) for record keeping under IRR99. A passbook contains personal identification specific to the outside worker, their cumulative dose assessment during the year and their medical classification, plus information about their employer. It also contains estimates of exposure during their periods of work in other employers' controlled areas.

Passbooks may be used until they are full. A passbook may only be used by the outside worker to whom it was issued, but may continue to be used if that outside worker changes employer.

Employers must ensure that their outside workers have valid passbooks and that the information in them is brought up to date (dose assessment and medical reviews) before services are undertaken. They may find it helpful to examine entries in passbooks, either directly or by other arrangement, between jobs. This will reveal any unexpected doses, or gross discrepancies between estimated doses and assessed doses, which may need investigation.

## Transitional arrangements

Passbooks issued under OWR remain valid while the outside worker continues to be employed by the same employer. When the outside worker leaves that employment, the new employer will need to arrange the issue of a new passbook approved for the purposes of IRR99 (if the employee is to remain an outside worker).

## Exchange of information between employers

The employer of the outside worker and the employer in control of the controlled area should exchange information about the risks and training needs associated with the proposed services. This will enable suitable outside workers to be chosen and adequate arrangements to be made for their protection. The type of information that may need to be exchanged includes:

- the details of the actual work to be done;
- the type of likely radiation exposure;
- an estimate of the total dose likely to arise from the work;
- the work procedures that will be required to keep doses as low as reasonably practicable (including any use of personal protective equipment);
- any local restrictions that will be applied;
- the relevant local rules that apply (including emergency arrangements and contingency plans);
- RPS and RPA appointments; and
- any relevant dose constraints, special dose limits or declaration of pregnancy or breastfeeding.

If the outside worker needs additional training to carry out the services, the two employers should agree who will provide it. The arrangements for supervision need to be clearly established and, if the work will take place outside normal hours, information on emergency contacts may need to be exchanged.

For long-term work, where a contract remains valid over a period of years, it is a good idea for the employers concerned to regularly review the effectiveness of their information exchange, to ensure that it is still appropriate and adequate.

## What to do before an outside worker starts work

The radiation employer should check the information in the outside worker's passbook and be satisfied that the worker is fit and trained to do the work. If not, the outside worker should not be allowed to start work until any necessary remedial action has been taken, in conjunction with the outside worker's employer where appropriate. The name and address of the employer where the services are being carried out need to be entered in the passbook.

## Estimating doses

External radiation may be estimated by means of direct-read, or locally-read, dosimeters. For internal exposure,

the use of area or workplace measurements may be appropriate; such measurements, made in consultation with the RPA, may need to be backed up by comparison with doses received by any other workers in the area who are wearing personal dosimeters or personal air samplers. Where more than one RPA is involved, it may be necessary for them to liaise. Further details on dosimetry are given in *Radiation doses - assessment and recording* Information Sheet no 2(revised) in this series.

## Estimates of dose from a contamination incident

An initial estimation of dose may not be possible for outside workers who have received, or are thought to have received, a dose from a contamination incident. In this situation, a note in the dose estimate section of the passbook needs to record that an investigation is in progress, naming the employer and the ADS involved.

## Entering dose estimates in passbooks

Dose estimates are made and entered when the services on the employer's site have ended, or when outside workers leave the site to start work for a different employer, even if the services have not been completed and will be resumed at a future date. They are not needed each time outside workers physically leave the site, eg at the end of a day's work.

Where outside workers stay with one employer for longer than a dose assessment period, the dose estimate entered in the passbook should cover the whole period but may, where appropriate, take account of any assessed doses available.

## Further information

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA. Tel: 01787 881165 Fax: 01787 313995.

HSE priced publications are also available from good booksellers.

For other enquiries ring HSE's InfoLine Tel: 08701 545500, or write to HSE's Information Centre, Broad Lane, Sheffield S3 7HQ. Website: [www.hse.gov.uk](http://www.hse.gov.uk)

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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