

LEAFLET 39**RADIATION SAFETY DUTIES OF MOD EMPLOYEES****CONTENTS****Para**

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SCOPE

1 This leaflet covers the specific radiation safety duties of MOD employees. The duties are those which derive mainly from the Ionising Radiations Regulations 1999 and the Radioactive Substances Act 1993. This leaflet does not cover the general safety duties of MOD employees which are detailed at Leaflet 47 of JSP 375.

STATUTORY REQUIREMENTS AND PARALLEL ARRANGEMENTS

2 In addition to the general requirements of the Health and Safety at Work etc Act 1974 and the Management of Health and Safety at Work Regulations 1999, the following specific legislation applies directly or is applied indirectly through parallel arrangements designed to achieve equivalent standards:

- Ionising Radiations Regulations 1999 (IRR99) (apply directly).
- Radioactive Substances Act 1993 (RSA93) (parallel arrangements).

RADIATION SAFETY DUTIES OF ALL MOD EMPLOYEES

3 Employees have radiation protection responsibilities under the IRR99. Their responsibilities are as follows:

- 3.1 Employees are not to intentionally or recklessly misuse or interfere with any radioactive substance or any other source of ionising radiations.
- 3.2 Employees are not to knowingly expose themselves or any other person to radiation doses greater than is necessary to undertake their work and are to exercise reasonable care in carrying out that work.
- 3.3 As far as reasonably practical no unsealed radioactive substance or article containing a radioactive substance is to be held or directly manipulated in the hand.
- 3.4 Employees are to carry out work in accordance with local orders.
- 3.5 Employees are to wear protective clothing or respiratory protection as required in local orders or as instructed by the RSO or RPS, and are to report any defects they may discover. They are required to return the equipment after use to the accommodation provided for it.
- 3.6 Employees are to wear personal dosimeters provided and are to look after them and inform the RSO or RPS immediately of any loss or damage to such a dosimeter.
- 3.7 Employees are to provide for analysis such biological samples that may be reasonably required (by the CO, AD (Appointed Doctor) or Approved Dosimetry Service (ADS)) or submit themselves to external radiation monitoring when so directed by the CO.
- 3.8 Employees must immediately report the following to the CO through the appropriate supervisor or line manager:
- 3.8.1 Where they have cause to believe that they or some other person has received an overexposure.
 - 3.8.2 Where they become aware that radioactive material has been lost, stolen, spilled or dispersed to the environment.
 - 3.8.3 Where a malfunction of X-ray generating equipment or industrial radiography equipment occurs which has led to or could have led to any person receiving an unusual radiation dose.
- 3.9 Employees are to submit themselves to medical examinations or tests as required by the CO and must provide the AD or employment medical adviser with such information concerning their health as may reasonably be required.
- 3.10 Employees who are designated as classified persons (see Leaflet 38) and are issued with a radiation passbook must not misuse the passbook or falsify or attempt to falsify any of the information contained in it.

RADIATION SAFETY DUTIES OF COMMANDING OFFICERS AND APPOINTEES

Commanding Officers (CO) and Heads of Establishment

4 The CO has a duty to the Secretary of State, and a personal responsibility, to protect the environment and secure the health, safety and welfare of their staff at work. The CO is also required to protect persons not in MOD employment (e.g. members of the public) against risks to their health and safety arising from the MOD work activities. This includes radiation safety. The CO's authority (but not responsibility) for radiation safety management arrangements may be delegated to appropriate personnel, such as a Radiation Safety Officer (RSO).

5 The appointments which a CO may need to make are listed below. The appointments are to be made in writing. A detailed list of the CO's duties is at Annex A.

Radiation Protection Adviser (RPA)

6 The appointment of a Radiation Protection Adviser (RPA) is a statutory requirement and, with the exception of the certain establishments associated with nuclear programmes, this appointment is to be made at TLB level. The occasions on which the CO must consult with an RPA are detailed at Leaflet 7.

Radiation Safety Officer (RSO)

7 The Radiation Safety Officer (RSO) is not a statutory appointment under the IRR99; this appointment is normally to be made by the CO as part of the local safety organisation. In some cases it may be appropriate for one RSO to be appointed to cover a group of local units. For units where the risk from work with ionising radiation is low, the CO may dispense with this appointment – however the duties which are normally delegated to an RSO must be then carried out by the CO or delegated to another suitable person e.g. an RPS.

8 Where an RSO is appointed, they are to ensure that they are familiar with the specific radiation hazards at their unit and that adequate radiation protection arrangements are made to minimise the radiation hazard. RSOs act on behalf of the CO from whom they derive their authority and they are to have direct access to the CO. Further details of the RSO's duties are given at Annex B.

Radiation Protection Supervisor (RPS)

9 The appointment of an RPS for each area where it is necessary to designate work areas as controlled or supervised (see Leaflet 4) is a statutory requirement.

10 The prime responsibility of an RPS is to supervise work in accordance with the local orders for radiation safety (which include the essential content of *local rules* for such controlled or supervised areas required by IRR99). They will normally report directly in this capacity to the RSO. In the absence of an RSO, the RPS will report directly to the CO or Head of Establishment on radiation protection matters.

11 The RPS is to be directly involved with the work with ionising radiations, preferably in a line management position that grants authority to exercise close supervision to ensure that the work is undertaken in accordance with the local orders, though they need not be present all the time. The RPS is to have an understanding of IRR99 in order to ensure compliance with these regulations. The RPS is to understand the necessary precautions to restrict exposure and also what to do in an emergency. A notice stating the name of the RPS and the appropriate telephone number is to be kept posted where it can be read conveniently by the persons working in the relevant controlled or supervised area.

12 The duties of the RPS are given at Annex C.

Workplace Supervisor (WPS)

13 Where a unit carries out work with ionising radiation but where it is unnecessary to designate controlled or supervised areas, it is not necessary to appoint an RPS. However, it is still necessary to have work place supervision to ensure that work is carried out in accordance with local orders for radiation safety and hence a Workplace Supervisor (WPS) is to be trained and appointed to carry out this task. They will normally report directly in this capacity to the RSO. In the absence of an RSO, the WPS will report directly to the CO or Head of Establishment on radiation protection matters.

14 Where a unit holds radioactive material, a Workplace Supervisor (Radioactive Materials) is to be appointed for each area where those materials are stored and/or used. The duties of a WPS (Radioactive Materials) are given at Annex D.

15 Where a unit uses minor X-ray generators such as postal and baggage X-ray fluoroscopes, or uses high voltage equipment generating parasitic X-rays, a Workplace Supervisor (X-ray) is to be appointed for each area where such equipment is used. The duties of the WPS (X-ray) are (as appropriate):

15.1 Supervision of work involving postal and baggage X-ray fluoroscopes in accordance with local orders including the radiation safety arrangements described at Leaflet 24.

15.2 Supervision of work involving high voltage equipment (generating parasitic X-rays) in accordance with local orders including the radiation safety arrangements described at Leaflet 23.

16 Where levels of radon in a workplace exceed 400 Bqm^{-3} , but there is no requirement to designate supervised or controlled areas, a Workplace Supervisor (Radon) is to be appointed. The WPS (Radon) is to supervise the radiation protection arrangements for protection against radon as detailed in Leaflet 32.

Qualified Person for testing equipment

17 The CO of an establishment which has its own ionising radiation protection instrument examination and testing facility, is to appoint in writing one or more qualified persons to carry out or to supervise the testing of ionising radiation protection instruments in accordance with JSP 425 and the Ionising Radiation Regulations 1999.

TRAINING

18 The general training requirements for employees and appointees are given at Leaflet 15. Specific advice on appointments and training is to be sought from the RPA.

TRANSITION ARRANGEMENTS

19 RPS posts designated under previous arrangements, which do not have responsibilities for any controlled or supervised areas (as described in Leaflet 4), will become WPS posts starting in January 2007. It would be appropriate to make this change when appointments (including training) and local orders are next reviewed.

20 Individuals in such posts (who have previously received suitable RPS training) will not require any additional training in order to undertake WPS duties. Refresher training for the WPS role will be required in due course at the timescales specified in JSP 392.

RECORDS

21 Records of appointments and training are to be retained for a minimum of 2 years after termination of the appointment. At the end of this period, an assessment is to be made of the relevance of retaining the records in accordance with MOD policy at Volume 1 Chapter 11. Personnel files are to be annotated with the dates of commencement and termination of the appointment and the training they received.

RELATED LEAFLETS

22 Leaflets referred to within this leaflet are shown in Table 1.

Table 1 Related Leaflets

Leaflet Number	Leaflet Title
2	Risk assessments
3	Notification, approval and assessment of the introduction and use of radioactive substances and other sources of ionising radiation
4	Restriction of exposure to radiation
5	Written arrangements for unclassified persons entering controlled areas

6	Dosimetry and personal dose records
7	Radiation Protection Adviser consultation and advisory visits
8	Radiation monitoring and radiation protection instruments
9	Storage and accounting for radioactive materials
10	Radiation protection aspects of transport and movement of radioactive materials
11	Requirements for the transfer, sale, loan and gifting of radioactive material and contaminated items
12	Accumulation and disposal of radioactive waste
14	Investigation, notification and reporting of unusual radiation events
15	Training requirements and courses
16	Local orders for radiation safety
23	Radiation safety arrangements for high voltage electrical equipment
24	Radiation safety arrangements for postal and baggage fluoroscopes
32	Radiation safety arrangements for protection against radon
38	Classified persons and outside workers
40	Contingency plans
JSP 800 Vol. 4a	Dangerous goods by air regulations
JSP 375 Leaflet 46	MOD health and safety handbook – health and safety responsibilities and duties of MOD employees
JSP 800 Vol. 4b	Transport of dangerous goods by road, rail or sea

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LEAFLET 39 ANNEX A**DUTIES OF COMMANDING OFFICERS AND HEADS OF ESTABLISHMENT**

1 The Commanding Officer/Head of Establishment (hereafter abbreviated to CO) has a duty to the Secretary of State, and a personal responsibility, to protect the environment and secure the health, safety and welfare of their staff at work. They are also required to protect persons not in MOD employment (e.g. members of the public) against risks to their health and safety arising from the MOD work activities. This includes radiation safety. The CO's authority (but not responsibility) may be delegated to appropriate personnel, such as a Radiation Safety Officer (RSO). The CO's detailed duties are described below.

1.1 Radiation Protection Adviser (RPA). The CO is to ensure that the RPA is aware of all work involving ionising radiations carried out at their unit or establishment and that RPA visits occur at appropriate intervals. The RPA is to be provided with adequate information and facilities to undertake their work and is to be consulted when appropriate. The requirements for consultation with an RPA are given at Leaflet 7.

1.2 Appointed Doctor (AD). The CO is to ensure that, where applicable, the AD is aware of all work involving ionising radiations carried out at their unit or establishment. The requirements for medical surveillance of personnel are detailed at Leaflet 6. The AD is to be provided with adequate facilities to carry out medical examinations. They are to be provided with copies of dose records and sickness absence records of personnel being examined and allowed access to working areas which they may inspect.

1.3 Appointments. The CO is to make the appropriate radiation safety appointments in writing (see main body of this leaflet).

1.4 Risk assessments and contingency plans. The CO is to ensure that risk assessments are carried out (see Leaflet 2) and contingency plans prepared and documented (see Leaflet 40) for all activities involving the use of sources of radiation and radioactive material

1.5 Notifications. The CO is to ensure that notification of the introduction and use of radioactive substances is undertaken in accordance with Leaflet 3.

1.6 Transfer and disposal of radioactive material or radioactive waste. The CO is to ensure that radioactive materials are transferred in accordance with Leaflet 11 and radioactive waste is disposed of in accordance with Leaflet 12. Transport of materials and waste off site is to be carried out in accordance with Leaflet 10 and JSP 800 Vol. 4a or 4b.

1.7 Local orders. The CO is to ensure that a complete set of local orders (see Leaflet 16) governing work with ionising radiation is prepared by, or in consultation with, the RPA. The local orders are to be referenced in the establishment's (Safety, Health, Environment and Fire (SHEF) statement of organisation and arrangements. The CO is to ensure that the workforce is adequately supervised and that they work in accordance with the local orders for radiation safety.

1.8 Restriction of exposure. The CO is to ensure that all reasonably practicable steps are taken to restrict the extent to which individuals are exposed to ionising radiations and to prevent any dose limit being exceeded (see Leaflet 4).

1.9 Information and training. The CO is to ensure that all workers have been given information, instruction and training on the tasks that they are to undertake (see Leaflet 15).

1.10 Dosimetry. The CO is to ensure that the radiation dose received by all persons working in controlled areas are measured and recorded, and that the appropriate documentation is maintained. Arrangements are also to be made for the analysis and recording of biological samples or external radiation monitoring of personnel when recommended by the RPA. Detailed requirements for dosimetry are given in Leaflet 6.

1.11 Provision of facilities and equipment. The CO is to ensure that sufficient safety equipment and other facilities are provided and are in good working order to ensure adequate protection arrangements for persons working with ionising radiation.

1.12 Co-operation with other employers. The CO is to ensure that appropriate information is supplied to other COs or Heads of Establishment and employers of contractors regarding their visiting workers and of work to be undertaken at the unit or establishment by visiting workers. Further details for outside workers (classified persons) are given at Leaflet 38 and for unclassified persons at Leaflet 5.

1.13 Investigations and reporting. The CO is to ensure that unusual radiation events are investigated and reported in accordance with Leaflet 14.

1.14 Audits. The CO is to ensure that a compliance audit programme and systematic follow-up arrangements are in place.

LEAFLET 39 ANNEX B**DUTIES OF THE RADIATION SAFETY OFFICER (RSO)**

1 The RSO acts on behalf of the CO or Head of Establishment from whom they derive their authority. The RSO duties may include the following as delegated by the CO:

- 1.1 To provide first-line advice on radiation safety to the CO or Head of Establishment and other personnel at their establishment.
- 1.2 To consult the RPA on radiation protection matters for which the RPA has been appointed (see Leaflet 7).
- 1.3 To monitor the RPSs in the discharge of their duties.
- 1.4 To carry out regular review of radiation safety arrangements and to audit procedures and local orders against the requirements of the appropriate regulations and Service publications. The frequency of audits is at the discretion of the RSO.
- 1.5 To obtain and distribute all necessary radiation safety information.
- 1.6 To maintain an effective liaison with the AD and other specialist officers and to manage co-operation with other employers on behalf of the CO.
- 1.7 To ensure that risk assessments have been carried out and to prepare the unit or establishment local orders and emergency procedures as directed by the CO, in consultation with the RPA (see Leaflets 2 and 16).
- 1.8 To ensure that notification of the introduction and use of radioactive substances is undertaken in accordance with Leaflet 3.
- 1.9 To co-ordinate all investigations in association with the RPA into known or suspected incidents of unusual radiation exposures or release, loss or theft of radioactive materials and to ensure that such incidents are reported in accordance with Leaflet 14.
- 1.10 To ensure the compliance of visitors or visiting workers with local orders and written arrangements (see Leaflet 5).
- 1.11 To ensure that all records are kept and maintained for the statutory and MOD policy period of time.
- 1.12 To co-ordinate the radiation safety training (including basic, on the job and continuation training) for personnel at the unit or establishment (see Leaflet 15).
- 1.13 To procure sufficient safety equipment and radiation monitoring instruments to ensure satisfactory radiation safety standards and organise the repair, maintenance and calibration of the equipment, and to maintain records of such (see Leaflet 8).
- 1.14 Where the unit holds a relevant environment agency notification the RSO is to monitor the holdings of radioactive material held by the establishment against the quantities stated in the unit's notification and ensure they are not exceeded (see Leaflet 3).
- 1.15 To co-ordinate the transfer of radioactive material (see Leaflet 11), disposal of radioactive waste (see Leaflet 12) and movement or transport of material or waste in accordance with Leaflet 10 and JSP 800 Vol. 4a or 4b.
- 1.16 Other relevant duties designated by the CO or Head of Establishment.

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LEAFLET 39 ANNEX C**DUTIES OF THE RADIATION PROTECTION SUPERVISOR (RPS)**

1 The Radiation Protection Supervisor (RPS) is appointed in respect of a controlled or supervised area and will normally report directly in this capacity to the RSO. In the absence of the RSO, an RPS will report directly to the CO or Head of Establishment on radiation protection matters.

2 The prime responsibility of an RPS is to ensure that work is carried out in accordance with local orders in the areas for which they are appointed. The principal duties of the RPS include, where appropriate, the following:

2.1 To be familiar with the areas, processes and equipment(s) for which they are appointed and be aware of the hazards under normal and abnormal working conditions.

2.2 To inform the CO through the RSO if any piece of equipment is unsafe from a radiation protection point of view or a process is carried out in a manner that exposes persons unnecessarily to ionising radiations.

2.3 To be aware of the radiation and contamination level in those areas for which they are RPS and to arrange a suitable monitoring programme in consultation with the RPA and RSO.

2.4 In consultation with the RPA and RSO, draw up and maintain local orders, including contingency plans for the areas for which they have been appointed (see Leaflet 40).

2.5 To assist the RSO with or to undertake the investigation of any suspected radiation overexposure or any unusual radiation dose received by any individual (see Leaflet 14).

2.6 To investigate the loss, theft, spillage or escape of radioactive material through an unauthorised route, and inform the RSO of their findings (see Leaflet 14).

2.7 To inform the RSO of any fire or explosion occurring in any process involving radioactive material (see Leaflet 14).

2.8 To be responsible for the administration of personal monitoring and surveillance of the workforce and visitors (see Leaflet 6).

2.9 To be responsible for accounting for radioactive material used or stored in the areas for which the RPS is appointed.

2.10 To prepare and maintain records relating to radiation protection, including dosimetry records, source lists including leakage tests, instrument log cards, inspections of protective clothing, etc.

2.11 To ensure that all workers under their control have been suitably instructed in the hazards and radiation protection procedures and are aware of the relevant safety rules and instructions (see Leaflet 15).

2.12 To demarcate and provide notices for all controlled or supervised areas for which they are responsible (see Leaflet 4).

2.13 To ensure that sufficient numbers of suitable monitoring instruments in serviceable condition are provided, and used to ensure adequate radiation protection control over the work (see Leaflet 8).

2.14 To organise the transfer of radioactive material and disposal of radioactive waste. (See Leaflets 11 and 12).

- 2.15 To organise the movement and transport of radioactive material or radioactive waste in accordance with Leaflet 10 and JSP 800 Vol. 4a or 4b.
- 2.16 To participate in the risk assessment process as required by the RSO (see Leaflet 2).
- 2.17 Other relevant duties as designated by the CO.

LEAFLET 39 ANNEX D**DUTIES OF THE WORKPLACE SUPERVISOR (WPS)**

1 Where a unit holds or uses ionising radiation but where it is unnecessary to designate controlled or supervised areas, it is not necessary to appoint an RPS. However, it is still necessary to have work place supervision to ensure that work is carried out in accordance with local orders for radiation safety and hence a Workplace Supervisor (WPS) is to be appointed to carry out this task for each radiation area concerned. A WPS may be classed as WPS (Radioactive Materials), WPS (X-Rays) or WPS (Radon). The WPS will normally report directly in this capacity to the RSO. In the absence of an RSO, the WPS will report directly to the CO or Head of Establishment on radiation protection matters.

2 The prime responsibility of a WPS is to ensure that work associated with the radioactive materials for which they are appointed is carried out in accordance with local orders for radiation safety. The principal duties of the WPS include, where appropriate, the following:

- 2.1 To be familiar with the type(s) of radiation for which they are appointed and be aware of the hazards under normal and abnormal working conditions.
- 2.2 To inform the CO through the RSO of any concerns from a radiation protection point of view or where work is carried out in a manner that exposes persons unnecessarily to ionising radiations.
- 2.3 To be aware of the radiation levels associated with the radioactive materials.
- 2.4 To provide input to local orders and contingency plans regarding the areas to which they have been appointed (see Leaflets 16 and 40).
- 2.5 To investigate the loss, theft, spillage or escape of radioactive material through an unauthorised route, and inform the RSO of their findings (see Leaflet 14).
- 2.6 To inform the RSO of any fire or explosion occurring in any process involving radioactive material (see Leaflet 14).
- 2.7 To account for the radioactive material for which the WPS is responsible.
- 2.8 To prepare and preserve records relating to radiation protection, including source lists, leakage tests, inspections of protective clothing, etc.
- 2.9 To ensure that all persons carrying out work with radiation under their control have been suitably instructed in the hazards and radiation protection procedures and are aware of the relevant safety orders and instructions (see Leaflet 15).
- 2.10 To ensure that radioactive materials and their containers are suitably marked (see Leaflets 4 and 9).
- 2.11 To organise the transfer of radioactive material (see Leaflet 11).
- 2.12 To organise the movement and transport of radioactive material in accordance with Leaflet 10 and JSP 800 Vol. 4a or 4b.
- 2.13 To participate in the risk assessment process as required by the RSO (see Leaflet 2).
- 2.14 Other relevant duties as designated by the CO.

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LEAFLET 39 ANNEX E**RECORD KEEPING**

1 The following is a summary of the retention of common records related to radiation protection, together with their retention times. It is not intended to be an exhaustive list; further information should be sought from your appointed RPA:

- 1.1 HSE notification of work with ionising radiation (current copy)
- 1.2 Environment agency notifications (current copy)
- 1.3 Ship/site/establishment/equipment risk assessments (current copy)
- 1.4 Records of RSO audits/incidents/investigations (minimum of 2 years)
- 1.5 Annual holding return (current copy)
- 1.6 Dosimetry Laboratory certificates (minimum of 2 years)
- 1.7 RPA reports (previous 2 reports)
- 1.8 Dosimetry quarterly dose records, F Med 291A (retain indefinitely)
- 1.9 Health record for classified persons, F Med 291F (retain indefinitely)
- 1.10 Radiation survey records (includes radon) (minimum of 2 years)
- 1.11 Written arrangements (current copy)
- 1.12 Equipment quality assurance procedures and results (minimum of 2 years)
- 1.13 Source lists/muster records (minimum of 2 years)
- 1.14 Leak test certificates (minimum of 2 years)
- 1.15 Instrument function check records (minimum of 2 years)
- 1.16 Instrument calibration certificates (current copy)
- 1.17 SITPRO Dangerous Goods Note/internal transfer records (minimum of 2 years)

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