



REPPIR

**REQUIREMENTS FOR THE APPROVAL OF DOSIMETRY SERVICES
UNDER THE IONISING RADIATIONS REGULATIONS 1999**

**SUPPLEMENT ON APPROVAL FOR EMERGENCY EXPOSURES
DURING INTERVENTION – THE RADIATION (EMERGENCY
PREPAREDNESS AND PUBLIC INFORMATION)
REGULATIONS 2001
RADS supp/2003**



These requirements, which include technical criteria for approval and supporting guidance, are issued by the Health and Safety Executive as a supplement to its existing requirements for approval of dosimetry services, for the purpose of approval of dosimetry services for emergency exposures incurred during intervention, under Regulation 14 of the Radiation (Emergency Preparedness and Public Information) Regulations 2001.

Following the supporting guidance is not compulsory and dosimetry services are free to take other action to demonstrate that the criteria in this document have been met.

FOREWORD

This document is concerned with approval of dosimetry services for assessment and recording of emergency exposures incurred from intervention during a radiation emergency.

The Health and Safety Executive (HSE) has published a Statement on the Approval of Dosimetry Services and associated requirements for the approval of dosimetry services under the Ionising Radiations Regulations 1999 (RADS Parts 1 –3).¹⁻³ The Radiation (Emergency Preparedness and Public Information) Regulations 2001⁴ (REPPiR) provide for approved dosimetry services to issue dosimeters, to carry out assessment of emergency exposures, and to keep records of doses for employees who are subject to emergency exposures. HSE has therefore prepared supplementary criteria for the approval of dosimetry services for the purpose of Regulation 14 of REPPiR.

Dosimetry services undertaking assessment and record-keeping of radiation doses received by classified persons under IRR99, and by employees (including classified persons) who are subject to emergency exposures under REPPiR, must be approved for these purposes by HSE or by a body authorised in writing by HSE. The organisation responsible for approving dosimetry services is referred to in this document as the 'Approval Body', and dosimetry services approved by this body may be regarded as approved dosimetric services within the meaning of Council Directive 96/29/Euratom.

The requirements which must be satisfied to obtain approval under REPPiR for emergency exposures incurred during intervention are specified in this document, which should be read together with the relevant part of the requirements for the approval of dosimetry services under IRR99.¹⁻³ This document sets out the procedures and criteria that will be used by the Approval Body for the assessment of dosimetry services seeking approval for either the measurement and assessment of emergency exposures from external radiations or from internal radiations, or for keeping records of emergency exposures in dose records.

The document sets out the objectives to be achieved and the requirements a service must satisfy to meet those objectives. It is in three sections. The first section gives an introduction; the second section describes procedural requirements; and the third section gives criteria for approval.

The criteria for approval are supplemented by guidance to indicate how they may be satisfied. This guidance is intended to help dosimetry services and the Approval Body. Following the guidance is not compulsory and dosimetry services are free to take other action to demonstrate that they meet the criteria in this document. Separate guidance⁵ on REPPiR is available for employers, explaining their responsibilities.

Printed and published by the Health and Safety Executive

RADS supp/2003

CONTENTS

Page number

FOREWORD

SECTION ONE

Introduction

Background	1
Objectives.....	2

SECTION TWO

Procedural requirements for approval and arrangements for revocation of approvals

Applications for approval	3
Reassessment of approved dosimetry services.....	3
Procedures for approval or reassessment of approval.....	3
Fees for approval or reassessment of approval.....	4
Performance tests	4
Conditions of approval.....	4
Revocation of an approval.....	4

SECTION THREE

HSE criteria for approval

Criteria applicable to all ADS

General	6
Emergency preparedness.....	6

Criteria applicable only to ADS (Assessment)

Staff, expertise, resource and facilities	7
Suitability of dosimeters etc.....	7
Consistent level of performance of dosimeters etc	8
Reliability of the level of service.....	9

	Page number
Guidance made available to employers.....	10
Reporting assessments of emergency exposures to the employer and HSE	11
Reporting results to other ADS	11
Criteria applicable only to ADS (Records)	
Contents of dose records.....	12
Provisions of information to the employer.....	13
Termination records.....	13
References	14
Annex 1 to criteria for approval – content of dose records.....	15
Annex 2 to criteria for approval.....	18
Appendix 1 to RADS REPIR Supplement	
Statement of Service	19

SECTION ONE

Introduction

Background

1. Regulation 2(1) of the Radiation (Emergency Preparedness and Public Information) Regulations 2001⁴ (REPPIR) defines an “approved dosimetry service” as an approved dosimetry service within the meaning of the Ionising Radiations Regulations 1999⁶ (IRR99) and which is approved for the purpose of Regulation 14 of REPPIR. Regulation 14 relates to emergency exposures received as a result of intervention during a radiation emergency. Any dosimetry service wishing to gain approval for REPPIR must therefore be approved under IRR99. Approval is granted by HSE, or by another body with whom HSE has made an agreement in writing to perform the approval function instead. In this document, the term ‘Approval Body’ is used to mean either HSE or a body appointed by HSE to undertake the approval function. HSE has published requirements for approval under IRR99 in three parts (the RADS documents).¹⁻³ This document should be read together with the relevant part of those requirements, which respectively cover external radiation, internal radiation and co-ordination and record-keeping.

2. In this document, dosimetry services approved to assess doses received from external or internal radiation are referred to as ADS (Assessment); dosimetry services approved for co-ordinating contributions to dose assessments and for dose record-keeping are referred to as ADS (Records). Any ADS (Assessment) or (Records) may apply for approval under REPPIR.

3. This supplement to the RADS documents deals with the following aspects which are specific to approval under REPPIR:

- a) the criteria the Approval Body will use to assess whether a dosimetry service appears fit for approval or for continuing approval under REPPIR;
- b) the assessment of emergency exposures incurred as a result of intervention during a radiation emergency;
- c) the arrangements for notification of the results of assessment of emergency exposures without delay to employers and HSE;
- d) the arrangements for reporting assessed doses to ADS (Records);
- e) the arrangements for performance testing (where relevant);
- f) the separate recording in dose records of emergency exposures incurred during intervention; and
- g) the circumstances in which an approval under REPPIR may be revoked.

Objectives

4. Any dosimetry service seeking approval under REPPiR to assess emergency exposures incurred as a result of intervention during a radiation emergency either from external or internal radiations must demonstrate to the Approval Body that, when called upon to deal with emergency exposures, it can provide and maintain a service which will:

- a) carry out assessment of emergency exposures without delay;
- b) where practicable, keep assessment of emergency exposures separate from routine dose assessments and from assessment of accident doses;
- c) notify the results of assessment of emergency exposures without delay to the employer and to HSE; and
- d) report the results to ADS (Records) in reasonable time.

5. Any dosimetry service seeking approval under REPPiR to make, maintain and keep records of emergency exposures must demonstrate to the Approval Body that, when called upon to do deal with emergency exposures, it can provide and maintain a service which will:

- a) record emergency exposures separately in the dose record of employees who already have such records;
- b) create a new record for employees who do not have a dose record; and
- c) make available to the employer within a reasonable time a copy of the record of dose relating to any employees who have undergone emergency exposures.

Emergency exposures should be recorded in the dose record separately from the dose recorded under IRR99. Similarly, emergency exposures should not be included within the cumulative dose recorded under IRR99, but should be clearly shown as additional dose received under REPPiR Regulation 14.

SECTION TWO

Procedural requirements for approval and arrangements for revocation of approvals

Applications for approval

6. The HSE Statement on the Approval of Dosimetry Services (HSE Statement) sets out the arrangements for making applications for approval and for reassessing approved services, together with the current fees charged. Applications for approval of a dosimetry service under REPPIR should be made in writing to the Approval Body specified in the HSE Statement and must include:

- a) a letter from the Head of the Service applying for approval, detailing what dosimetry service(s) are to be approved. The details should include
- b) the full name and address of the dosimetry service (and other contact details, eg telephone and fax numbers, email address and a contact name);
- c) reference to the certificate of approval under IRR99 which covers the service; or to an application for approval of the service under IRR99. (No dosimetry service which is not approved under IRR99 will be considered for approval under REPPIR);
- d) the supplementary Statement of Service which gives the required details about the service (see Appendix 1);
- e) examples of outputs from the service (as appropriate), to include dummy data;
- f) a copy of a signed certificate for a successful performance test, where relevant (see paragraph 10); and
- g) the appropriate administration fee (see current HSE Statement).

Reassessment of approved dosimetry services

7. Approvals granted to dosimetry services under REPPIR will be reassessed at the same time as the reassessment of the dosimetry service under IRR99. A Statement of Service provided for the reassessment may combine the details for routine dosimetry with the details required for approval under REPPIR, if this is more convenient to the dosimetry service. Otherwise the supplementary Statement of Service for REPPIR purposes should be appended to the main Statement of Service.

Procedures for approval or reassessment of approval

8. Assessment of a dosimetry service provided by the Approval Body for approval under REPPIR will follow the same process as is described in the RADS documents 1 – 3.

Fees for approval or reassessment of approval

9. A fee is payable at the time each application is made, to cover the administrative costs of processing the application, whether or not the application is successful. A separate assessment fee is also payable, prior to the notification of the result of the application to the dosimetry service, to cover the cost of any work undertaken by the Approval Body in connection with the application. This includes, where appropriate, reasonable travel and subsistence costs of the Approval Body incurred in connection with the inspection of a dosimetry service located outside the UK. The fees are set out in the current Health and Safety Fees Regulation⁷ which are revised annually.

Similarly, applicants for re-approval will have to pay a basic administration fee at the time of application, and an assessment fee prior to notification of the result. However, as REPPIR re-approvals will be undertaken at the same time as re-approvals under the IRR99, no additional travel and subsistence cost will be payable.

Performance tests

10. HSE may develop performance tests specifically aimed at dosimetry services seeking approval under REPPIR. Until these are available, dosimetry services will be assessed on the basis of the performance they have demonstrated in tests carried out as required for the purposes of approval under IRR99. HSE regards the accuracy and precision of dosimetry for emergency exposures, which could exceed normal dose limits, as being especially important. Therefore, for the purposes of approval of a dosimetry service under REPPIR, a performance test result in Band A will be a pass; a result lying in Band B or Band C will be regarded as a failed test.

Conditions of approval

11. A separate approval certificate will be issued to any dosimetry service approved for the purposes of REPPIR. This certificate will show the scope of the approval to be limited by Schedule 1 of the certificate of approval. Schedule 2 will specify any conditions which may apply.

Revocation of an approval

12. HSE may invoke in writing any approval given to a dosimetry service. If the approval of a dosimetry service under IRR99 is revoked, and it is not renewed by a fresh certificate of approval, then the approval under REPPIR will be revoked at the same time.

13. An approval under REPPIR may be separately revoked if an ADS:

- a) does not send performance test results in 'Band A' to the Approval Body (where such tests are required) within the period set out in RADS Part 1 or 2;

b) does not conform to the current criteria for approval under REPIR and fails to provide the Approval Body with an action plan which is sufficient to enable the deficiencies to be rectified within three months.

Approval will also be revoked if a dosimetry service requests revocation of its approval or is issued with a new certificate that supersedes the previous certificate.

14. In the circumstances described in paragraph 13(a) and (b), the Approval Body may conclude that revocation of the approval under REPIR should be considered. The revocation procedure will follow the same lines as described in the RADS documents.

SECTION THREE

HSE Criteria for Approval

Criteria applicable to all ADS

General

Criterion 1. The service shall be an approved dosimetry service under the Ionising Radiations Regulations 1999.

Guidance on Criterion 1
--

1.1 Only dosimetry services approved under the Ionising Regulations 1999 (IRR99) may also be approved for the purposes of the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPiR). A dosimetry service may, however, apply at the same time for approval for the purposes of both sets of regulations.
--

Emergency preparedness

Criterion 2. The service shall prepare a plan for responding to a radiation emergency. The plan should include the need to divert sufficient resources for its response, including staff, and dosimeters or other dose assessment equipment. It should also set targets for the timely delivery of its response.

Guidance on Criterion 2
--

2.1 In drawing up its plan the dosimetry service should consult its client(s) to ensure that it is fully informed about potential radiation emergencies, and about the client's needs in terms of provision of dosimeters or other dose assessment equipment and in terms of the timing of its response. It should warn the client of the need to keep the service informed of developments, and in particular to alert it as soon as it becomes apparent that emergency exposures are likely to be incurred.

2.2 It will be necessary to review the plan periodically, and in the event of any significant changes in circumstances (such as the acquisition of new clients). It is recommended that the plan be reviewed at intervals of no longer than 3years. All the staff of the dosimetry service should be made familiar with the plan. The findings of the review, and any actions identified as necessary, should be documented.
--

2.3 Sufficient stocks of dosimeters should be available for issue to employers whose emergency plan includes urgent issue of dosimeters directly from the ADS.
--

Criteria applicable only to ADS (Assessment)

Staff, expertise, resources and facilities

Criterion 3. A dosimetry service carrying out assessment of emergency exposures incurred during intervention, and arising from external or internal radiation, shall be able to demonstrate that it has the necessary staff, expertise, resources and facilities to be able to provide and maintain a service which when called upon to do deal with emergency exposures will:

- carry out assessment of emergency exposures without delay;
- where practicable, keep assessment of emergency exposures separate from routine dose assessments and from assessment of accident doses.

Guidance on Criterion 3	<p>3.1 In the context of carrying out assessments of emergency exposures, “without delay” should be interpreted strictly. For example, if an emergency were to occur, the dosimetry service should be able to get in place sufficient staff to make dose assessments. This would mean having arrangements for staff to be called out should an emergency take place outside normal working hours.</p> <p>3.2 Normally, separate dosimeters or other devices should be issued to people who undergo emergency exposures. However, it may not always be practicable to arrange this due to the urgency of the situation. In such a case a dosimeter issued for routine dosimetric purposes may have to serve. In such a case, the dose assessed using the dosimeter should be attributed entirely to the emergency exposure unless information is available enabling routine and other accident doses received by the person concerned to be deducted.</p> <p>3.3 Where practicable, dosimeters (or samples) used for emergency exposures should be measured or assessed separately from other dosimeters (or samples).</p>
--	---

Suitability of dosimeters etc

Criterion 4. The service shall ensure that any dosimeter or other device is used as part of the dosimetry system is suitable for assessment of emergency exposures in the foreseeable environments in which it will be kept and used.

**Guidance
on
Criterion 4**

4.1 The environmental conditions that may be experienced during a radiation emergency are likely to be more extreme than would be the case for normal work. The service should take into consideration the effect of such conditions on the performance of the dosimeter before selecting a dosimetry system for use in the assessment of emergency exposures.

4.2 It may be necessary for employers to retain a stock of unused dosimeters, or other equipment such as personal air samplers, for issue when the emergency plan is put into operation. The service should be aware of the useful shelf-life of such stored dosimeters or equipment and arrange for the stock to be replaced at suitable intervals.

4.3 Any dosimeters or other equipment requiring maintenance or periodic calibration should be recovered from the employer's stock at the appropriate intervals and replaced with freshly maintained or calibrated equipment.

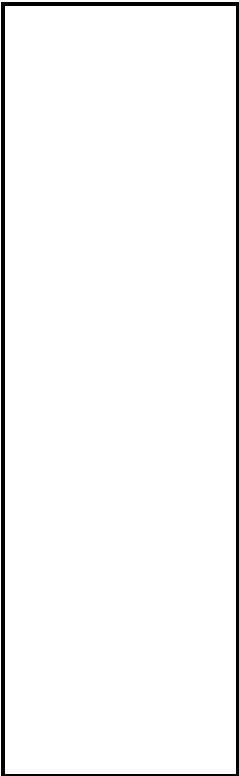
Consistent level of performance of dosimeters etc

Criterion 5. The service shall ensure that any type of dosimeter or other device used has a consistent and adequate level of performance in the radiation fields and ambient conditions likely to be encountered in a radiation emergency.

**Guidance
on
Criterion 5**

Energy/dose ranges

5.1 A dosimetry system operated by an approved dosimetry service for the purposes of IRR99 would normally be adequate for the assessment of emergency exposures as well. However, any limitations on the environments in which the dosimeter may be used, set out in the certificate of approval of the dosimetry service, need to be taken into account. A service approved to assess emergency exposures from external radiation may need to have discussions with its potential clients about the likely energy spectra and dose ranges that might be encountered during a radiation emergency. This would help to ensure that such limitations do not preclude the use of the dosimeter for assessment of emergency exposures.



Internal radiation

5.2 A service approved to assess emergency exposures from internal radiation may also need to have discussions with its potential clients about the likely nature of any airborne radioactive substances to which employees may be exposed during a radiation emergency. The composition and particle size distributions of such airborne radioactive substances may differ from those encountered during routine exposures, and the dosimetry service may have to make adjustments to its dosimetric methods to take account of such differences. Also it may be appropriate to institute triage procedures not routinely employed, such as nose-blow sampling, to assess the possibility of intake of radioactive material during the emergency.

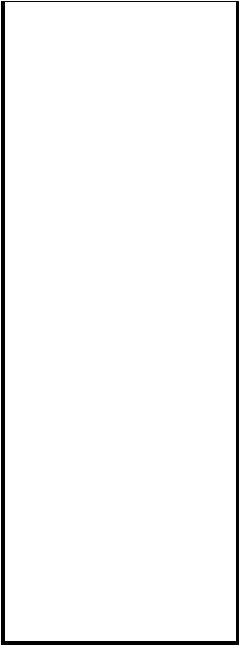
5.3 The effect on assessment of emergency exposures of any respiratory protective equipment or other personal protective equipment worn by the personnel needs to be borne in mind. The dosimetry service should seek information from the employer about any such equipment worn and take account of its use in making assessment of the emergency exposures.

Reliability of the level of service

Criterion 6. The service shall ensure that adequate arrangements are made for the timely despatch of dosimeters or other devices to employers and for the availability of sufficient and suitable dosimeter processing equipment, bioassay equipment etc, appropriate to the scope of the service (where appropriate).

**Guidance
on
Criterion 6**

6.1 In the event of a radiation emergency the employer will need to be able to issue dosimeters as a matter of urgency to those employees who are permitted to receive emergency exposures. This will mean that either the employer will need to keep a supply of dosimeters available, or the dosimetry service will itself issue dosimeters directly to those employees. Either way, a sufficient number of dosimeters must always be available for immediate use.



6.2 The dosimetry service must be prepared to assess without delay doses received from intervention during a radiation emergency. It is essential therefore that sufficient processing equipment is maintained ready for such an eventuality. This may mean that equipment in use for assessment of doses from routine work (including for other clients) may have to be diverted to assessing emergency exposures. Provided this does not cause excessive delays (more than two days) in routine assessment work, this arrangement would normally be acceptable.

6.3 The service should be able to demonstrate its ability to assess doses without delay. One way to achieve this is to ensure that when undertaking a performance test (see Section 2, paragraph 10) the time between receipt of dosimeters or samples from the test house and providing a report of the results is as short as practicable and in any event not longer than 48 hours.

Guidance made available to employers

Criterion 7. The service shall provide specific written advice to clients about the conditions of storage of any dosimeters or other devices to be held for use in a radiation emergency and any other information necessary to ensure that such dosimeters or devices are used correctly.

**Guidance
on
Criterion 7**

7.1 The written advice to the employer would normally cover matters such as:

- dosimeters used for the purpose of monitoring emergency exposures should be stored separately from dosimeters used for routine monitoring;
- dosimeters used for emergency exposures should be clearly labelled as such and employers should ensure that their staff know where the dosimeters are kept when an emergency occurs;
- these dosimeters should be checked routinely to ensure they are working properly and replaced as necessary. A log of all these checks should be maintained;

	<ul style="list-style-type: none"> ▪ the suitability of the store for keeping these dosimeters eg the need for security; ▪ the location and construction of the store need to ensure that the dosimeters within it cannot be affected by ionising radiations during a radiation emergency; ▪ the need to provide the dosimetry service with information on personal protective equipment, including respiratory protective equipment, in order to take into account the effects of such equipment on assessment of emergency exposures.
--	--

Reporting assessments of emergency exposures to the employer and HSE

Criterion 8. The service shall be capable of reporting without delay to the employer and to HSE the assessed dose for any individual receiving an emergency exposure.

<p>Guidance on Criterion 8</p>	<p>8.1 “Reporting without delay” would normally be taken to mean reporting as soon as the results are available (eg by fax or telephone), followed up by written confirmation.</p> <p>8.2 The report to HSE should be sent to the appropriate office for the site on which the emergency exposure took place. This is likely to be the office of the Nuclear Safety Directorate, or the Regional Office of the Field Operations Directorate of HSE.</p>
---	---

Reporting results to other ADS

Criterion 9. The service shall ensure that the report to ADS (Records) of any dose assessments carried out for people who have been subject to emergency exposures are clearly separate from any dose assessments from routine exposures or from accident exposures. The dose assessments shall be identified as relating to emergency exposures and shall specify the date(s) on which the emergency exposures took place.

<p>Guidance on Criterion 9</p>	<p>9.1 The time allowed for reporting of dose assessments to ADS (Records) for the purposes of routine dosimetry is generally 14 days (see RADS Part 1, Criterion 13, and Part 2, Criterion 14). The same reporting times would apply to dose assessments for emergency exposures.</p>
---	--



9.2 The report of dose assessments for emergency exposures should form a quite separate report from any dose assessments for routine dosimetry purposes, or indeed for any dose assessments resulting from accident exposures.

Criteria applicable only to ADS (Records)

Contents of dose records

Criterion 10. A dosimetry service making, maintaining and keeping dose records for employees who may receive emergency exposures shall make separate provision in dose records to enter the additional items of information specified in Annex 1 relating to any emergency exposures incurred by persons whose records it keeps. Where no dose record exists for the employee, the dosimetry service will create a record containing the information specified in Annex 1, and in addition that specified in Annex 2.

**Guidance
on
Criterion 10**

10.1 The time allowed for entering dose assessments in dose records for the purposes of routine dosimetry is generally 14 days (see RADS Part 3, Criterion 8). The same time limits would apply to dose assessments for emergency exposures.

10.2 In order to record the details of the radiation emergency required in Annex 1, the service should obtain these details from the employer.

10.3 The record of dose assessments for emergency exposures must be separate and distinguishable from the routine (and accident) dose assessments contained in the record.

10.4 Emergency exposures received under REPPiR should not be added into the annual dose summation of doses received under IRR99. Similarly, emergency exposures should not be included within the cumulative dose recorded under IRR99, but should be clearly shown as additional dose received under REPPiR Regulation 14. A value of 'total dose' for individuals may be recorded which comprises lifetime dose received under IRR99 and emergency exposures received under REPPiR.

Provision of information to the employer

Criterion 11. The service shall have adequate arrangements to ensure that, within seven days of recording the information, a copy of the information specified in Annex 1 for any employee who has received an emergency exposure, is sent to the employer.

<p>Guidance on Criterion 11</p>	<p>11.1 The employer requires a copy of the record of dose relating to any employee who has received an emergency exposure in order to be able to give that copy to the employee concerned. The report form should clearly identify the employee to whom it relates and the radiation emergency in which the emergency exposure was incurred and show the doses received as a result of the emergency exposure. All the required details are specified in Annex 1.</p>
--	--

Termination records

Criterion 12. In addition to the particulars required by Criterion 19 of RADS Part 3, the service shall record separately in termination records of employees who have received emergency exposures the following items:

- effective dose from emergency exposures – sum of effective dose from external radiations (E_{ext}) and committed effective dose from internal radiations (E_{int});
- lens of the eye, skin and body extremities – equivalent dose from emergency exposures (where this has been assessed separately); and
- neutron component of emergency exposures;
- emergency exposures should not be included within the cumulative dose recorded under IRR99, but should be clearly shown as additional dose received under REPPiR Regulation 14. A value of 'total dose' for individuals may be recorded which comprises lifetime dose received under IRR99 and emergency exposures received under REPPiR.

REFERENCES

1. Requirements for the Approval of Dosimetry Services under the Ionising Radiations Regulations 1999: Part 1 External Radiations. RADS 1. HSE.
2. Requirements for the Approval of Dosimetry Services under the Ionising Radiations Regulations 1999: Part 2 Internal Radiations. RADS 2. HSE.
3. Requirements for the Approval of Dosimetry Services under the Ionising Radiations Regulations 1999: Part 3 Co-ordination and Record Keeping. RADS 3. HSE.
4. The Radiation (Emergency Preparedness and Public Information) Regulations 2001. Statutory Instrument 2001 No 2975 HMSO. ISBN 0 11 029908 6.
5. A guide to the Radiation (Emergency Preparedness and Public Information Regulations) 2001; L126. HSE Books. ISBN 0 7176 2240 1.
6. The Ionising Radiations Regulations 1999. Statutory Instrument 1999 No 3232 HMSO. ISBN 0 11 085614 7.
7. The Health and Safety (Fees) Regulations 2003. Statutory Instrument 2003 No 547 HMSO. ISBN 0 11 045186 4.

Annex 1 to criteria for approval – content of dose records (see Criterion 10)

	Requirement
<p>(A1.1) Details of radiation emergency</p> <ul style="list-style-type: none"> i. Date on which radiation emergency occurred. ii. Address of location where radiation emergency occurred. iii. Name and address of radiation employer where radiation emergency occurred. iv. Brief details of work undertaken by employee who received emergency exposure. 	<p>Provision should be made for this information in each case but only has to be included in the event of the employee being subject to an emergency exposure.</p>
<p>(A1.2) Dose assessment for emergency exposures – external radiations</p> <ul style="list-style-type: none"> i. Effective dose from external radiation (E_{ext}) for each dose assessment. ii. Equivalent dose to the lens of the eye (where this is assessed separately) for each dose assessment. iii. Equivalent dose to the skin (specifying where on the body the dose assessment was made) for each dose assessment. iv. Equivalent dose to the hands, forearms, feet and ankles (specifying on what extremity the dose assessment was made) (where these are assessed separately) for each dose assessment. v. Neutron component of effective dose (where exposure to neutrons is assessed) for each dose assessment. 	<p>Provision should be made for this information in each case but only has to be included in the event of the employee being subject to an emergency exposure.</p>

	Requirement
<p>(A1.3) Dose assessments for emergency exposures – internal radiations</p> <p>Committed effective dose from internal radiations (E_{int}) (where this is assessed separately), each dose assessment.</p>	<p>Provision should be made for this information in each case but only has to be included in the event of the employee being subject to internal radiation as a result of an emergency exposure.</p>
<p>(A1.4) Summation of external dose and internal dose for emergency exposures</p> <p>i. Effective dose – sum of effective dose from external radiations (E_{int}).</p> <p>ii. Lens of the eye, skin and body extremities – equivalent dose (where this is assessed separately).</p>	<p>Provision should be made for this information in each case but only has to be included in the event of the employee being subject to an emergency exposure.</p>
<p>(A1.5) Estimated doses for emergency exposures</p> <p>i. A 'flag' for any estimated dose which is reported.</p> <p>ii. The inclusion of all estimated doses in dose summations.</p>	<p>Required in the event of an estimated dose being reported for an emergency exposure.</p>
<p>(A1.9) Summary of additional information</p> <p>The results of any workplace monitoring used by the employer to estimate individual doses for emergency exposures.</p>	<p>Required but information included at least in linked database when received from employer.</p>
<p>(A1.10) Dose limits</p> <p>A statement as to whether the emergency exposure was in excess of the normal dose limits applying to the employee, specifying the values of any such dose limits exceeded.</p>	<p>Required in every case in the event of the employee being subject to an emergency exposure.</p>

	Requirement
<p>(A1.11) Dose levels</p> <p>A statement as to whether the emergency exposure was in excess of the dose levels notified to HSE, specifying the values of any such dose levels exceeded.</p>	<p>Required in every case in the event of the employee being subject to an emergency exposure.</p>

Annex 2

	Requirement
(A21.1) Employee details a) Full name. b) National insurance number. c) Gender (male/female). d) Full date of birth. e) Name and address of employer. f) Name and address of ADS supplying dose assessment information for this record.	Required for dose records created for the purpose of REPPIR Regulation 14(8).

Appendix 1 to RADS REPIR Supplement

STATEMENT OF SERVICE FOR THOSE SEEKING APPROVAL OF CONTINUING APPROVAL UNDER REPIR FOR ASSESSMENT AND RECORDING OF EMERGENCY EXPOSURES

The statement of service submitted an application for approval or at the time of reassessment should contain the following information. References to published information and supporting documents which are not part of this statement will be acceptable provided those references etc contain the necessary information, but dosimetry services should be prepared to provide copies if requested by the Approval Body. The submitted documents should include examples of the output from the ADS and a copy of the information or guidance provided to clients.

General

The name and address of the service.

Criterion 1

1. Reference to the certificate of approval under IRR99 relating to the service.

Emergency preparedness (Criterion 2)

2. Reference to the plan of the dosimetry service for responding to a radiation emergency, including either a copy of the plan (if short), or a summary.

ADS (Assessment) only

Staff, expertise, resources and facilities (Criterion 3)

3. A brief explanation of the steps taken to meet Criterion 3, showing how assessments of emergency exposures can be carried out without delay, and kept separate from routine dose assessments and from accident dose assessments.

Suitability of dosimeters etc (Criterion 4)

4. A summary of considerations that ensure that the dosimeters or other devices used for dose assessment will be suitable for emergency exposures in the foreseeable environments in which they will be kept and used. This should include the performance of dosimeters, and the arrangements for storage, maintenance and calibration of dosimeters or other equipment.

Consistent level of performance of dosimeters etc (Criterion 5)

5. An outline description of the arrangements to ensure that the dosimetry system would be adequate to assess doses from external or internal radiation likely to be encountered during a radiation emergency. This should include any differences that would be necessary from the methods of dose assessment used in routine dosimetry.

Reliability of the level of service (Criterion 6)

6. Description of the arrangements made for timely despatch of dosimeters or other devices to employers and for the availability of sufficient equipment to carry out assessments of emergency exposures.

Guidance made available to employers (Criterion 7)

7. Details and examples of written advice to clients specifically for the purposes of dosimetry in the event of emergency exposures.

Reporting assessments of emergency exposures to the employer and HSE (Criterion 8)

8. A description of the arrangements for reporting the results of assessments of emergency exposures without delay. An example of the report should be provided, including dummy data.

Reporting results to other ADS (Criterion 9)

9. A description of the arrangements for reporting results to ADS (Records). An example of the report should be provided, including dummy data.

ADS (Records) only

Contents of dose records (Criterion 10)

10. A description of how provision is made in the dose records for all of the information in Annex 1 to be entered separately from other information in the records. An example of the dose record should be provided, including dummy data which clearly shows how doses received under IRR99 and emergency exposures received under REPPiR are recorded.

11. A description of arrangements for creating dose records where none already exist for employees.

Provision of information to the employer (Criterion 11)

12. Procedures for supplying information to the employer within specified timescale. A completed example of the report should be included. Dummy data can be used but the intention should be to show how the report will be completed accurately.

Termination records (Criterion 12)

13. Procedures for including the required information in termination records. A completed example of the termination record showing this information (with dummy data) should be included. The dummy data should show how doses received under IRR99 and emergency exposures received under REPPiR are recorded.