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Environmental Permitting Guidance
Radioactive Substances Regulation

For the Environmental Permitting (England and Wales) Regulations 2010

September 2011

Version 2.0

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

DEPARTMENT OF ENERGY & CLIMATE CHANGE

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Revision of the Guidance

This publication is updated from time to time with new or amended guidance. The table below is an index to these changes.

date of amendment	**chapter/ paragraph where amendment can be found**	**nature of amendment** - what paragraphs have been inserted, deleted, or amended - what subject matter is covered by the amendment
12/03/2010	Ch 4	Typographical amendments
Sep 2011	Throughout	Amendments reflecting the guidance on the scope of and exemptions from the radioactive substances legislation in the UK

Contents

1. Summary

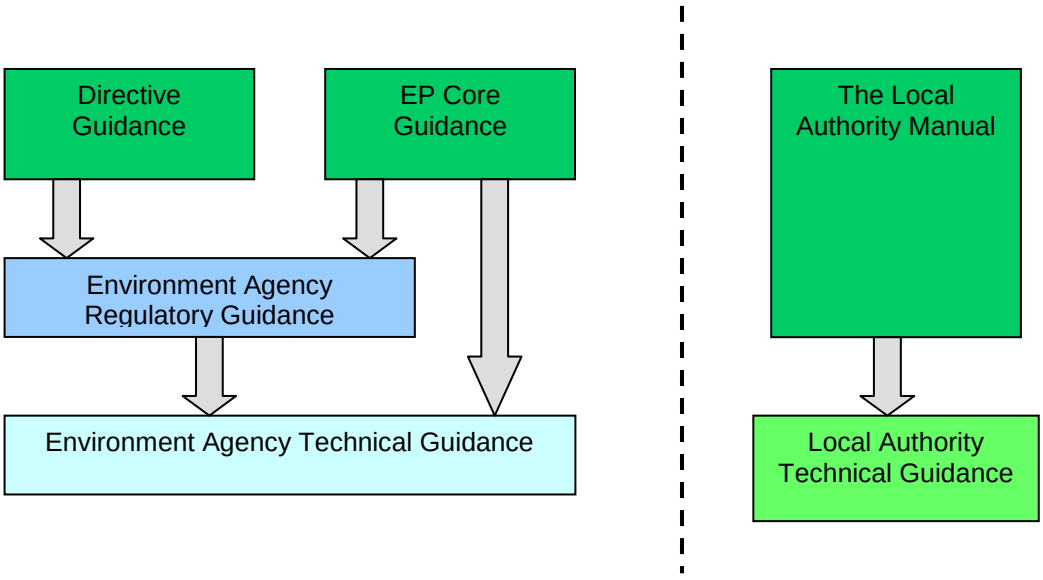
About this guidance

1.1. This guidance is aimed at helping readers understand the permitting and other requirements specific to Radioactive Substances Regulation (RSR). The RSR regime covers:

- more than one European Directive, parts of which are also implemented by other regulatory regimes which, to an extent, complement RSR;
- various Government policies and strategies; and
- some duties delivered by other statutory requirements, such as trans-frontier shipments, and justification. Although not delivered by the Environment Permitting Regulations, these are briefly covered in this guidance for completeness.

1.2. This guidance is being published to help the Environment Agency, which is responsible for RSR, and those whose operations involve the keeping and use of radioactive materials, and the accumulation and disposal of radioactive waste ('operators'). It sets out the position of the Secretaries of State for Environment, Food and Rural Affairs and Energy and Climate Change (DECC) and the Welsh Assembly Government (WAG) on how RSR should be applied and implemented, and how particular terms should be interpreted in England and Wales. The guidance explains the legal requirements, but only the national or European courts can give a definitive interpretation of the legislation.

Figure 1. Illustration of guidance relationships



1.3. This guidance is part of a series of documents which accompany the Environmental Permitting (England and Wales) Regulations SI 2010 No.675 ('the Regulations')[1].

1.4. The series consists of the Core Guidance for the Environmental Permitting (England and Wales) Regulations 2010 ('the Core Guidance') which describes the general permitting and compliance requirements; and specific guidance on each of the European Directives implemented by the Regulations. In the case of RSR guidance, this includes Government policies, strategies and other duties delivered through RSR. This is illustrated in Figure 1.

1.5. This guidance should be read in conjunction with the Core Guidance. The Core Guidance and this Guidance are complementary but where specific requirements for RSR differ from those in the Core Guidance, this document sets out the differences.

1.6. The Environment Agency has provided additional guidance on RSR. This is available on its website www.environment-agency.gov.uk/epr. Of particular note are the Radioactive Substances Regulation – Environmental Principles (REPs), which set out the Environment Agency's overall approach to RSR.

1.7. To ensure this guidance is current and up to date, from time to time this guidance will be updated. Where made, revisions can be found in the 'Revision of Guidance' section at the front of the document.

1.8. A separate glossary of terms is available[2]. The glossary briefly explains the meaning of many words, phrases and acronyms used in the Regulations and Directives.

1.9. This guidance document is compliant with the Code of Practice on Guidance on Regulation. If you feel this guidance breaches the code, or notice any inaccuracies within the guidance, please contact the EPP team at: eppadministrator@defra.gsi.gov.uk.

[1] Relevant amendments made by the Environmental Permitting (England and Wales) (Amendment) Regulations 2011 (SI 2011/2043)
[2] Available at www.defra.gov.uk/environment/policy/permits/guidance.htm

2. Introduction

Radioactive Substances Regulation

2.1. The main objectives of Radioactive Substances Regulation (RSR) are to:

- Establish and maintain control over the keeping, use and security of radioactive materials including sealed radioactive sources and mobile radioactive apparatus;
- ensure that the accumulation and disposal of radioactive wastes are managed effectively to limit radiological impact on the general public and the environment;
- ensure operators make appropriate financial provisions for re-use, recycle or disposal of high activity sealed radioactive sources.

By meeting these objectives, RSR delivers Government policy on management of radioactive materials and radioactive wastes and implements European Directive requirements on radiological protection of the public and security of high activity sealed sources.

2.2. The objectives apply to all non-nuclear users of radioactive materials such as hospitals, universities and industrial radiographers. In the case of nuclear site licensees, the disposal of radioactive wastes is regulated by the Environment Agency while the keeping and use of radioactive materials and accumulation of radioactive wastes is regulated by the Office for Nuclear Regulation (ONR) [3] (see paragraph 2.11 below).

2.3. Chapter 3 of this guidance sets out the activities involving radioactive materials and wastes which are within scope of RSR and those matters which are outside the scope or otherwise exempted from the need for a permit. Chapter 4 sets out the permitting requirements specific to RSR, based on the relevant directives and Government policies and strategies. It also describes how these are delivered through environmental permits for RSR. Chapter 5 describes other requirements that need to be considered in RSR.

2.4. RSR-specific requirements are set out in Schedule 23 to the Regulations (reproduced in this document as Annex 1). This replaces

[3] The Government has announced its intention to bring forward legislation to create a new independent statutory body outside of the Health and Safety Executive (HSE). In the meantime, the Office for Nuclear Regulation was set up in April 2011 as an agency within the HSE. It will carry out HSE's operational, regulatory and policy functions in relation to nuclear sites, security of nuclear material and sensitive information and safeguards. Subject to passage of the necessary legislation, it will also carry out certain functions related to the safety of transport of radioactive materials.

and repeals all of the Radioactive Substances Act 1993 (RSA 93), in England and Wales, which previously controlled the radiation exposure resulting from radioactive wastes entering the environment.

Basic Safety Standards Directive

2.5. Basic safety standards for radiological protection are set down in a series of Directives under the 1957 Euratom Treaty. The key Directive is the Basic Safety Standards Directive (96/26/Euratom) (BSSD). This lays down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation. It sets out the principles of justification, optimisation and dose limits for practices. 'Justification' means that for a class or type of practice, the overall benefits must outweigh the health detriments that may be caused.

2.6. The Justification of Practices Involving Ionising Radiation Regulations 2004 (SI 2004/1769) ('the Justification Regulations') implement the BSSD requirements in respect of the 'justification' of a class or type of practice resulting in exposure to ionising radiation. The Justification Regulations are not part of the Environmental Permitting regime. Decisions on Justification are a matter for Government, who seek advice as required including from the Environment Agency. If an application for an environmental permit relates to a practice under BSSD, then the Environment Agency should only grant that permit if the practice is justified.

2.7. Guidance produced by the Government and the devolved administrations on application and administration of the Justification Regulations makes clear that radioactive waste management and disposal is an integral part of the practice generating the waste and should not be regarded as a free-standing practice that requires its own justification.

2.8. Other parts of the BSSD in relation to optimisation, radiation dose limits and qualified experts have been implemented by the Radioactive Substances (Basic Safety Standards) (England and Wales) Direction 2000. These requirements are now included in Schedule 23, Part 4 of the Regulations. The Directive requirements are dealt with in more detail in Chapter 4.

Interface with other legislation

2.9. The Ionising Radiations Regulations 1999 (SI 1999/3232) (IRR99) implement in Great Britain a number of other requirements of the BSSD, particularly in relation to occupational exposure. There is, in certain circumstances, a balance to be struck between radiation exposure to a workforce and to members of the public. The regulator in respect of IRR99 is the HSE, and they and the Environment Agency co-operate in exercising their respective functions.

2.10. The Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 (SI 2006/1379) and the Radioactive Contaminated Land (Modification of Enactments) (England) (Amendment) Regulations 2007 (SI 2007/3245) and the Welsh equivalents (SI 2006/2988 and SI 2007/3250) (RCL) are concerned with the remediation of land contaminated with radioactive substances in certain circumstances. Such remediation could lead to a need for permitting under these Regulations in circumstances where radioactive waste is accumulated or disposed of. These regulations do not apply on nuclear sites and are not part of the Environmental Permitting Regulations.

2.11. The Nuclear Installations Act 1965 (NIA65) delivers many of the regulatory requirements for radioactive substances on sites licensed under NIA65. However, nuclear site licensees require an environmental permit for disposal of radioactive waste, and for the keeping or use of mobile radioactive sources. The regulator in respect of NIA65 is ONR and they and the Environment Agency co-operate in exercising their respective functions. In addition, tenants on nuclear licensed sites require RSR permits for the keeping or use of radioactive material, and the disposal of radioactive waste.

2.12. The Transfrontier Shipment of Radioactive Waste and Spent Nuclear Fuel Regulations 2008 (SI 2008/3087) (TFS) set out the circumstances under which radioactive wastes and spent nuclear fuel may be imported and exported. Regulation of transfrontier shipments is not part of the Environmental Permitting Regulations.

2.13. European Directives deal with radioactive waste and non-radioactive separately. Once a waste has been defined as radioactive, the Waste Framework Directive (WFD) controls do not apply even when the radioactivity is a minor polluting element of the waste. There are exceptions to this: (i) Any radioactive waste that is exempted from the requirement for an environmental permit in respect of a radioactive substances activity is covered by the hazardous waste regulations controls, where it has hazardous properties. (ii) A defined limited pool of radioactive wastes[4] falls into the requirements for a waste operation permit where it is exempt from the requirement for a permit in respect of a radioactive substances activity. This means that it is possible for radioactive waste within this defined pool to be subject to the requirement for a waste permit under the Environmental Permitting Regulations and also to be covered by the hazardous waste regulations controls, assuming that it has hazardous properties. To ensure the environment is protected from the non-radioactive elements of radioactive wastes, the Environment Agency must ensure

[4] Wastes include NORM waste; solid radioactive waste with no single item >$4x10^4$Bq; solid radioactive waste containing tritium and C-14 only, with no single item >$4x10^5$Bq; solid radioactive waste which consists of magnesium alloy, thoriated tungsten or dross from hardener alloy in which the thorium concentration does not exceed 4% by mass.

that under environmental permits they are managed to standards consistent with that for non-radioactive waste.

3. Scope of the Radioactive Substances Activities

What is a radioactive substances activity?

3.1. A radioactive substances activity is carried out where an operator keeps or uses radioactive materials or receives, accumulates and disposes of radioactive waste.

3.2. These activities are defined in Schedule 23, Part 2, paragraph11 to the Regulations. An operator will normally require an environmental permit to carry out these activities, unless outside the scope of regulation or exempted under the Regulations (see paragraphs 3.5 and 3.6 below).

3.3. There are different provisions on nuclear licensed sites. For licensees the term covers the keeping or use of mobile sources, the receipt and disposal of radioactive waste, but not its accumulation. For tenants, the term covers the keeping or use of all radioactive materials and the receipt and disposal of radioactive waste.

3.4. There is a new regulated activity which is not derived from RSA 93: intrusive investigation at a site intended wholly or substantially for the disposal of solid radioactive waste in an engineered underground facility, where the overlying geology (rock structure) provides a barrier against escape of radioactivity (see paragraphs 4.35 to 4.42 below).

What types of radioactive substances activity do not require a permit?

3.5. The Regulations define what are radioactive materials and wastes (Schedule 23, Part 2, paragraphs 3 to 10). The Core Guidance explains that in relation to radioactive substances activities, certain activities do not require a permit even though they are not exempt facilities. The types of radioactive material and radioactive waste are of such low risk that although they are within scope of RSR; their use or disposal does not require a permit . Radioactive substances activity exemptions are set out in Schedule 23, Part 7. Detailed guidance on this and what material and waste are outside the scope of the Environmental Permitting Regulations can be found in the Guidance on the Scope of and Exemptions from Radioactive Substances Legislation in the UK.[5]

3.6. Those who carry out activities in relation to radioactive material or waste need to decide whether they can work within the exemption provisions, although they may take advice from the Environment Agency. Although some activities in relation to certain material and

[5] Available at:www.defra.gov.uk/environment/policy/permits/guidance.htm

waste may not require a permit, this does not mean that they are completely outside the regulatory regime. The Environment Agency may inspect any premises where radioactive material is held or radioactive waste is disposed of, whether or not an environmental permit is required in relation to that radioactive material or waste and take any appropriate action within its powers.

3.7. The Regulations do not apply to radioactive material in or on any railway vehicle, road vehicle, vessel or aircraft which is 'in the course of a journey' or where the material is used for the purposes of propelling it (Schedule 23, Part 2, paragraph 13).

3.8. Premises occupied on behalf of the Crown for naval, military or air force purposes, or for the purposes of the Ministry of Defence, or occupied by or for the purposes of a visiting force are not subject to the RSR provisions of the Regulations (Schedule 4, paragraph 5). However, as a matter of Government policy, the Ministry of Defence complies with the requirements voluntarily, on a non-statutory basis (see paragraphs 5.16 to 5.17 below).

3.9. An environmental permit for RSR is only required where an 'undertaking' (defined in Schedule 23, Part 2, paragraph 1) is being carried on from a 'premises' as defined in the Regulations (Schedule 23, Part 2, paragraph 1). In most instances, this would exclude premises used solely for domestic purposes.

3.10. Historical activities or releases of radioactivity resulting from an incident may result in premises where no undertaking is, or has been, carried out becoming contaminated with radioactivity; for example, domestic properties. In such cases, the advice of the Environment Agency and the Radiation Protection Division of the Health Protection Agency should be sought.

4. Permitting Requirements

4.1. This Chapter describes the technical requirements that the permitting process must deliver and how the Regulations apply these requirements.

4.2. Permitting requirements are derived from Government policy and European Directives, as transposed in the legislation applying to England and Wales. In the permitting process, the Environment Agency must have regard to Statutory Guidance and should also take into account relevant Commission Recommendations and statements of Government policy and national strategies set out below.

4.3. RSR covers a wide range of practices with significantly different levels of hazard and risk. Therefore, the Environment Agency should employ a proportionate approach to permitting and setting conditions, including a consideration of the scale of the operation, the hazards present and the level of risks involved. Guidance on the permitting process is detailed in the Core Guidance.

4.4. The RSR provisions of the Regulations provide powers to the Environment Agency to dispose of radioactive waste in certain circumstances; these include waste on unoccupied premises, where occupants are absent or insolvent, or where the Environment Agency believes that the waste will not otherwise be disposed of in accordance with the RSR requirements of the Regulations (Schedule 23, Part 4, paragraph 4).

Directive Requirements

The Basic Safety Standards Directive (96/29/Euratom)

4.5. The BSSD lays down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation. The requirements of the Directive are set out in Schedule 23, Part 4. Article 2 of the BSSD describes the scope of the Directive as applying to '…all practices which involve a risk from ionising radiation emanating from an artificial source or from a natural radiation source in cases where natural radionuclides have been processed in view of their radioactive, fissile or fertile properties, namely: (a) the production, processing, handling, use, holding, …. and disposal of radioactive substances.' RSR partially delivers the requirements for control of the activities which come within Article 2 and other requirements under Articles 3(1), 4(1), 4(2), 5(1) and 47 through Schedule 23 to the Regulations. Other BSSD requirements, for example, those relating to health and safety of workers and import and export of radioactive material, are implemented by other legislation listed in Chapter 2 above.

4.6. Article 6(3) of BSSD defines the optimisation principle (Schedule 23, Part 4, paragraph 1). The Environment Agency must exercise its functions in relation to radioactive waste to ensure that:

- all exposures to ionising radiation of any member of the public and of the population as a whole resulting from the disposal of radioactive waste are kept as low as reasonably achievable, taking into account economic and social factors (ALARA); and

- the sum of the doses resulting from the exposure of any member of the public to ionising radiation does not exceed the specified dose limits.

4.7. An operator should use the “Best Available Techniques” (BAT) in relation to waste management and other associated matters which could have an impact on radiation doses to members of the public, in order to achieve the optimisation requirement. An applicant for an environmental permit should demonstrate to the satisfaction of the Environment Agency how the optimisation principle will be applied to the management and disposal of radioactive waste. The definition and application of BAT is described further in paragraphs 4.45 to 4.47. The Environment Agency should publish guidance on how operators might meet the optimisation principle.

4.8. The Environment Agency must ensure that the dose limit for members of the public will not be exceeded in respect of regulated activities. The dose limit (‘effective dose’) is 1.0mSv/year as set out in Article 13 of BSSD (Schedule 23, Part 3, paragraph 1(b)).

4.9. The Environment Agency must have regard to the following maximum doses to individuals (dose constraint) which may result from a defined source, for use at the planning stage in radiological protection (Schedule 23, Part 4, paragraph 2):

- 0.3 mSv/year from any source from which radioactive discharges are made; or

- 0.5 mSv/year from the discharges from any single site.

4.10. Limits and notification levels may be set by the Environment Agency within permit conditions, for example, for the following reasons:

- So that the permit holder can demonstrate that operational controls are working satisfactorily.

- So that the Environment Agency can be assured that the dose criteria are not being exceeded. (It is extremely unlikely that limits on discharges - to air, water or land - will be set such that any discharges at the limits will result in doses to the general public at, or close to, any relevant radiation dose limits. However, this situation cannot be ruled out in all circumstances).

- So that levels of radioactivity in foods do not exceed the Community Food Intervention Levels (CFILs) set under EU Council Regulation (Euratom) 3954/87.

4.11. Discharge limits set out in permit conditions should be below the levels at which the dose limits and constraints would be exceeded, based on a prospective dose estimation. A prospective dose estimation means a calculation or estimate, based on historical information for similar discharges, or on mathematical modelling, which shows what the radiation dose to a member of the public is likely to be. The Environment Agency will publish, and update as necessary, guidance on the calculation of prospective doses. However, applicants may use any other appropriate methods of dose calculation, which the Environment Agency should then consider as part of the permit determination process.

4.12. The operator should assess the likely impact of the permitted activity in terms of effective dose to members of the public. Assessments of effective dose should take account of past, present and future regulated discharges.

4.13. In the case of some sites that present a high potential environmental hazard, including all nuclear sites, the applicant should set out proposals for environmental monitoring in areas adjacent to the premises which could be affected by discharges directly to the environment. This is intended to inform the dose assessment mentioned in paragraph 4.12 above. This could include monitoring for air quality, radionuclide concentrations in locally-grown foods, and radionuclide concentrations in vegetation.

4.14. Matters relating to management of radioactive waste disposal should be undertaken following consultation by an operator with a 'Qualified Expert'. 'Qualified Experts' (from the BSSD definition) are:

> 'Persons having the knowledge and training needed to carry out physical, technical or radiochemical tests enabling doses to be assessed, and to give advice in order to ensure effective protection of individuals and the correct operation of protective equipment, whose capacity to act as a qualified expert is recognised by the competent authorities. A qualified expert may be assigned the technical responsibility for the tasks of radiation protection of workers and members of the general public.'

4.15. The role of a Qualified Expert is to advise an operator. Operators should satisfy themselves that the Qualified Experts they have decided to consult are suitable for their specific facility and the radioactive waste they are generating. In some cases, for instance in the non-nuclear sector, a Qualified Expert may also be a Radiation Protection Adviser, appointed under the IRR99, who possesses sufficient knowledge and experience of radioactive waste management. An operator will need to use suitably qualified and

experienced persons to implement the advice provided by a Qualified Expert. The Environment Agency will publish, and from time to time update, specific guidance on the Qualified Expert requirement.

The control of high-activity sealed sources and orphan sources (2003/122/Euratom)

4.16. The purpose of this Directive is to prevent exposure of workers and the public to ionising radiations arising from the inadequate control of high-activity sealed radioactive sources (HASS) and sources with no known owner (‘orphan sources’). Requirements of this Directive relating to the Environment Agency’s responsibilities have been implemented by RSR (Schedule 23, Part 5).

4.17. The requirements are as follows:

- All sealed sources should be stored securely. However, in the case of HASS and similar sources, the operator must make extra provisions, and the Environment Agency must be satisfied with these before granting a permit. These provisions are detailed in guidance produced for the purpose, (National Counter Terrorism Security Office: Security Requirements for Radioactive Sources, May 2008). However, the security arrangements actually in place at any premises **should not be detailed in the environmental permit application.**

- The Environment Agency will consult the relevant police force on the adequacy of the security arrangements proposed by an applicant and take into account any advice given by the police, when determining an application for an environmental permit for a HASS or similar source.

- Before any environmental permit to keep or use HASS is issued, the Environment Agency must be satisfied that adequate financial or equivalent provisions have been made for safe management of the source when it becomes disused.

- The Environment Agency needs to be satisfied that the operator’s HASS record keeping and reporting, and the Environment Agency's own keeping of HASS records, are in accordance with the requirements of the Directive.

- The Environment Agency needs to be satisfied that the operator has written procedures in place to ensure that any person authorised to have access to HASS has been subject to a satisfactory identity check.

Government Policies

Policy for the long term management of solid low level radioactive waste in the UK, 2007

4.18. This Policy Statement advises the Environment Agency to ensure that holders of RSR permits which allow the disposal of radioactive waste apply the waste hierarchy as defined in the Statement. Such permit holders should prepare case-specific and proportionate waste management plans. The Environment Agency is expected to deliver these, and other requirements, through environmental permitting. The Environment Agency should also publish guidance on these matters.

4.19. On nuclear licensed sites, the Environment Agency regulates the disposal of solid waste, as well as liquid and gaseous discharges. The ONR regulates the on-site arising and storage of waste from a health and safety perspective.

4.20. For Low Level Radioactive Waste (LLW), operators should:

- not create waste if possible ('avoidance');
- reduce waste arisings by activity and/or mass ('minimisation');
- investigate decay storage, re-use and recycle prior to considering disposal.

4.21. A radioactive waste management plan should be supplied as part of a permit application for radioactive waste disposal, explaining what waste management routes for solid waste have been considered and decided upon by the operator, a consideration of how the waste hierarchy has been applied, and how the proximity principle (see paragraph 4.23 below) has been addressed.

4.22. In preparing waste management plans, an operator should carry out an options assessment setting out what options have been considered for the management of solid Low Level Radioactive Waste (LLW). An options assessment is any formal and recorded method by which the preferred solution is determined from a number of possible alternatives. Review of the assessment by the Environment Agency will be necessary. The Environment Agency should provide guidance on options assessment and selection.

4.23. The proximity principle was introduced in Article 5 of the Waste Framework Directive (75/442/EEC as amended by Directive 91/156/EEC) in 1997, and is incorporated into UK waste strategy documents (see ref 11 in the Policy Statement). Applying the proximity principle means enabling waste to be disposed of in one of the nearest appropriate installations by means of the most appropriate methods and technologies in order to ensure a high

standard of protection to the environment and public health. Options assessments carried out to support the development of LLW management plans might include disposal to a centralised facility but must also consider other possible solutions, taking account of the proximity principle. However, although the aim to avoid excessive transportation of materials is an important consideration, it must be balanced with all the other relevant factors on a case by case basis.

4.24. The principle of proportionality applies to radioactive waste management plans and factors such as the waste type, radiological, chemical and physical characteristics, and available disposal options should be taken into account. In the case of smaller sites, a waste management plan may simply consist of a brief description of waste disposal options and considerations. For sites that present a high potential environmental hazard (for instance, in the nuclear sector), a more detailed plan is likely to be required.

4.25. Advice on suitable disposal routes for particular types of waste may be sought from a Qualified Expert or from the Environment Agency.

4.26. Operators who dispose of wastes by transfer to other sites must hold an environmental permit for these transfers, unless the waste is excluded or exempted. (see also paragraph 4.33 below).

4.27. Operators of sites receiving Low Volume Very Low Level Radioactive Waste (LV-VLLW) do not require an environmental permit to dispose of radioactive waste at those sites under these Regulations.

4.28. For landfill sites receiving High Volume Very Low Level Radioactive Waste (HV-VLLW), the Environment Agency needs to be assured that the radiological capacity of the landfill is not exceeded. For this reason, the Environment Agency will require operators of such sites to hold an environmental permit for the disposal of radioactive waste.

4.29. Certain LLW waste streams may be appropriate for ‘controlled burial’ arrangements. Controlled burial applies to circumstances where the VLLW thresholds have been exceeded, and where the destination site can demonstrate that radiological protection criteria have been met. An operator of a landfill site where controlled burial is to take place must hold an environmental permit for radioactive waste disposal under these Regulations.

4.30. Dedicated disposal facilities may be developed solely for LLW or HV-VLLW. These may be situated on or off nuclear sites. An operator of such a site will need to hold an environmental permit for disposal of radioactive waste. The Environment Agency should also consider the non-radiological impact of the radioactive waste being disposed of and may place conditions in the environmental permit in relation to such non-radiological properties.

Inter-site transfer of waste

4.31. Paragraphs 4.18 to 4.30 set out Government policy on the disposal of solid low level radioactive waste. These Regulations have removed the previous requirement under RSA 93 that applications for disposal are sent to the Local Authorities where it is proposed to send waste for disposal. As a result it will not be necessary for permits to identify specific site(s) at which the waste will ultimately be disposed of. Permits can allow transfer to any site where the operator of that site holds an environmental permit to accumulate or dispose of the relevant type of waste, or for LV-VLLW to any site disposing of conventional waste. However, the Environment Agency may identify specified sites in permits as necessary to meet the requirements of Government policy, for example to deliver the requirements of the proximity principle and the waste hierarchy. Records of waste transfers must be kept by both the consignor and the receiving site operator.

4.32. The operator consigning waste should have in place contractual arrangements with a waste disposal / storage company. (It is acceptable to establish a contract or contracts with a waste disposal *company*. It is not necessary to specify any particular *site* which will receive the waste). These contracts and transfer records should be available for inspection by the Environment Agency, either at the application stage or any subsequent stage of regulatory activity.

4.33. To ensure the previous level of transparency under RSA 93 is maintained, the Environment Agency should ensure that new environmental permits for sites that undertake final disposal of radioactive waste contain a condition requiring the operator to inform their local authority before the operator first receives waste from any new consignor. This condition should be included in existing permits before an operator of such a disposal facility accepts radioactive waste from a new consignor. Operators should inform the local authority of the origin and nature of the radioactive waste before the first waste is received from a new consignor.

4.34. The Environment Agency should consult on applications for new environmental permits for disposal of radioactive waste in line with its Public Participation Statement. This means local authorities will be aware of all permitted radioactive waste disposals in their area.

Managing Radioactive Waste Safely (MRWS) White Paper, 2008

4.35. The White Paper sets out how Government intends to take forward the process of partnership and voluntarism in relation to developing a geological disposal facility for higher-activity radioactive waste. In the White Paper, Government has said it is committed to ensure that there is appropriate regulation by the environmental regulators. This

includes “staged regulation” in respect of any relevant facility. The relevant ‘radioactive substances activity’, as defined in the Regulations (Schedule 23, Part 2, paragraph 11(6)) is:

> “... carried on where a person carries out intrusive investigation work or other excavation, construction or building work (a) to determine the suitability of any premises; or (b) to enable the use of any premises, as a place that may be used wholly or substantially for underground disposal.”

This does not include disposal of radioactive waste in a facility which is beneath the surface of the ground only by virtue of the placing of rocks or soil above it.

4.36. The Environment Agency has published ‘Guidance on Requirements for Authorisation’ (GRA) for geological disposal facilities. The guidance sets out the requirements and environmental objectives that the developer/operator of a radioactive waste disposal facility would need to meet to be granted a permit.

4.37. The process for design, construction, operation and closure of a geological disposal facility for higher activity wastes is expected to be conducted over a long time period – probably many decades. In the MRWS White Paper, the Government accepted that development of a geological disposal facility will be subject to staged regulation by the Environment Agency. The Regulations (Schedule 23, Part 2, paragraph 11(6)) provide the necessary powers to the Environment Agency to grant an environmental permit under a staged regulation process.

4.38. The MRWS White Paper makes clear that regulation is essential throughout the process of developing a geological disposal facility. It is recognised that the environmental permit issued early in the process will not contain any limits or conditions involving the use of radioactive materials or accumulation and disposal of radioactive waste except for the uses of such things as radioactive sources in borehole logging instruments, or radioactive materials for tracer experiments. However, decisions taken early in the process could have the effect of compromising the environmental safety case, which is ultimately necessary for disposal of radioactive waste to take place.

4.39. Site selection, in itself, is not subject to regulation by the Environment Agency under RSR. The Environment Agency should satisfy itself that a facility is, or can be, constructed and operated so as to meet the principles and requirements set out in the GRA; it will not need to be satisfied that it is the ‘best’ site.

4.40. The process stages, that is, the ‘hold points’ or timings of regulatory submissions, are a matter for the Environment Agency to develop. However, the following considerations apply:

- the stages should be clear and well-defined (for instance: start of intrusive site investigation; start of underground studies; pre-construction; pre-operation; pre-closure, after closure etc.);

- although the overall regulatory process is the responsibility of the Environment Agency, it is expected that the process will be developed in co-operation with the developer of the facility;

- the first stage should be before the start of intrusive site investigation at a candidate site for a geological disposal facility. The Regulations require the developer to make an application for an environmental permit and provide an appropriate supporting submission. The Environment Agency should undertake a regulatory assessment. The outcome of the assessment should be communicated to the developer, the host community and other stakeholders including the public. The Environment Agency will then consider whether or not to grant an environmental permit to proceed with intrusive site investigation and should consult widely before reaching its decision;

- the Environment Agency may require further submissions from the developer at each subsequent stage for regulatory review. Subject to satisfactory regulatory assessment, the Environment Agency may decide to grant a variation to the environmental permit to allow the development programme to proceed to the next stage;

- the permit determinations, and regulatory decisions based on them, should be subject to consultation. The Environment Agency should not make its final decisions until this consultation process is complete at each stage.

4.41. A geological disposal facility will require a nuclear site licence under the NIA65. The Environment Agency should coordinate its staged regulation process with the ONR's regulatory process for granting a nuclear site licence.

4.42. Staged regulation is principally intended for development of a geological disposal facility. The Environment Agency may decide to apply staged regulation to development of other types of underground radioactive waste disposal facilities. In such cases, application of staged regulation should be proportionate to the nature of the hazard and complexity of the proposed development.

National Discharges Strategy 2005–2030 and associated requirements of the Statutory Guidance on Discharges, 2009

4.43. This Strategy sets out what the Government wishes to see delivered in relation to its commitments under the 1992 OSPAR Convention, which guides international cooperation on protecting the marine

environment of the North-East Atlantic. The overall outcomes expected of the Strategy are:

- progressive and substantial reductions in radioactive discharges;
- progressive reductions in concentrations of radionuclides in the marine environment resulting from radioactive discharges, such that by 2020 they add close to zero to historic levels;
- progressive reductions in human exposures to ionising radiation resulting from radioactive discharges, as a result of planned reductions in discharges.

4.44. The Statutory Guidance requires the Environment Agency to base its regulatory decisions in relation to discharges of radioactive waste into the environment on the principles set out in the 2009 UK Strategy. These principles include the use of BAT as the means the operator uses to achieve an optimised outcome (as described in paragraph 4.7 above).

4.45. The term BAT means the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods of operation constitute the best available techniques in general or individual cases, special consideration shall be given to:

a) comparable processes, facilities or methods of operation which have recently been successfully tried out;

b) technological advances and changes in scientific knowledge and understanding;

c) the economic feasibility of such techniques;

d) time limits for installation in both new and existing plants;

e) the nature and volume of the discharges and emissions concerned.

4.46. What is BAT for a particular process will change with time in the light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding.

4.47. The use of BAT replaces “best practicable means” (BPM) and “best practicable environmental option “(BPEO), and is expected to deliver the equivalent level of environmental protection as achieved previously by the use of BPM and BPEO.

4.48. This is the optimisation requirement as applied to discharges. The operator should demonstrate how the optimisation principle has been applied to discharges of radioactive waste. In doing this the operator

should undertake a systematic and proportionate examination of waste management options having regard to the waste hierarchy.

4.49. The Environment Agency should set discharge limits based on the use of BAT by operators, at the minimum level necessary to permit normal operation of a facility. In regulating the normal operation or decommissioning of a facility the Environment Agency should take into account operational fluctuations, trends and events that are expected to occur over the likely lifetime of the facility. Flexibility in setting discharge limits may also be necessary in those cases where other key Government objectives need to be met, for example the safe and timely decommissioning of redundant facilities; clean-up of the historic legacy of radioactive wastes, security of energy supply; maintaining Defence nuclear and non-nuclear capabilities; and the use of radionuclides in medicine.

4.50. Where future disposals are not known with confidence, for instance, for some decommissioning operations, some flexibility should be considered. In setting limits under such circumstances; the Environment Agency should take account of the available information and should revise limits in light of experience and increased knowledge.

4.51. The Statutory Guidance also states:

> 'Where the prospective dose to the most exposed group of members of the public is below 10μSv/y from the overall discharges [of an operator] the Environment Agency should not seek to reduce further the discharge limits that are in place, provided the [operator] applies and continues to apply BAT'.

4.52. To demonstrate that the objectives of the National Strategy are being met, reporting of discharges is necessary. An RSR operator should set out how environmental discharges are to be measured or estimated. Government requirements for standardised reporting of discharges are described in paragraph 5.3 below. The Environment Agency should require, if necessary and by way of permit conditions, additional reporting requirements for the purposes of ensuring that operational controls are working satisfactorily.

The decommissioning of the UK nuclear industry's facilities, 2004

4.53. This policy sets out the objectives, including the environmental objectives, which need to be met during the decommissioning of the UK nuclear legacy. It sets out the BAT principle with respect to decommissioning.

4.54. The objective of decommissioning is to 'remove the hazard the facility poses progressively, giving due regard to security considerations, the safety of workers and *the general public*, and *protecting the*

environment….'. The italicised words are matters which need to be taken into consideration in RSR.

4.55. Each operator should produce and maintain a decommissioning strategy and decommissioning plans for its sites. These strategies and plans should take into account the views of stakeholders and the factors and considerations set out in Government policy.

4.56. BAT should be used to minimise the volumes of radioactive wastes which are created, particularly Intermediate Level Waste (ILW).

4.57. While there is a commitment to meet the objectives of OSPAR (*'progressive and substantial reductions in discharges'*), the Government recognises that short term (that is, time limited) increases in discharges of some radionuclides may be inevitable when dealing with decommissioning and legacy wastes. However, applications for such increases should be supported by arguments to show that they represent the optimal result from appropriate option studies (that is, they represent BAT).

4.58. When a facility ceases to be 'operational', a variation to the environmental permit will normally be required; this is mainly because the discharges profile for the facility will change, and the permit should reflect this new profile, for instance by setting out new discharge limits and/or reporting requirements.

4.59. Any new facility in the nuclear sector should be designed and built so as to minimise decommissioning and associated waste management and costs. This means that, for a RSR environmental permit application for a new nuclear facility, the applicant should show how such matters as decommissioning and waste minimisation have been taken into account at the design stage.

4.60. Decommissioning of nuclear facilities in England and Wales is regulated by the ONR and through the environmental permit granted by the Environment Agency.

Other Permitting Issues

Setting permit conditions

4.61. The setting of conditions within an environmental permit is at the Environment Agency's discretion, subject to the boundaries set out in this guidance and elsewhere. For example, limitations on the exercise of the Environment Agency's discretion may arise from duties under the Environment Act 1995, conservation legislation, and the Human Rights Act 1998. The Environment Agency should only set a condition that duplicates that set by another regulator when required to do so by Government. Permits may include conditions on, for example, management arrangements, monitoring and record

keeping that relate to the management of radioactive materials and wastes.

4.62. So that those persons who will be responsible for complying with the conditions are aware of them, a copy of the environmental permit should be displayed at the premises, unless directed by the Secretary of State or Welsh Ministers that the information must not be disclosed to the public.

Return of a site to a satisfactory state

4.63. The Environment Agency should not hold the operator responsible under the Regulations for contamination on the site that the regulator is convinced was caused:

- before the environmental permit was issued under the Regulations for a new facility;
- before the issue of a registration or authorisation under the 1960 or 1993 Radioactive Substances Acts.

4.64. The Environment Agency must ensure that the necessary measures have been taken to return the site of the regulated facility to a satisfactory state. This will generally mean that an operator should aim to restore a site to the condition it was in before the facility was put into operation. An operator proposing surrender of an environmental permit for a radioactive substances activity on a non-nuclear site will need to show there is no significant risk to people or the environment.

4.65. For nuclear sites, ONR has responsibilities under the NIA 65 for ensuring site licensees take the necessary measures to return sites to a satisfactory state.

Protection of groundwater

4.66. Before granting an environmental permit or a variation to an existing permit, the Environment Agency should consider the implications for groundwater that could arise from a radioactive substances activity. For further information, see the EPR Guidance on groundwater activities.

5. Other Requirements

The chapter sets out other requirements beyond the Environmental Permitting Framework that needs to be considered in RSR.

Euratom Treaty, Article 37 – Changes in radioactive discharges

5.1. The Euratom Treaty establishing the European Atomic Energy Community was signed in 1957. Under Article 37 of the Treaty, every time a Member State alters the way it plans to dispose of radioactive waste, or has a new nuclear facility that may increase discharges to air, water or land, it must make a submission to the European Commission. An Article 37 submission has to include enough information and data to determine whether such plans are liable to result in the radioactive contamination of the water, soil or airspace of another Member State. The Commission provides its opinion within six months, after consulting the group of experts referred to in Article 31 of the Treaty.

5.2. Until the European Commission gives its opinion, the Environment Agency cannot grant an environmental permit to allow an operator to proceed with new plans for disposal of radioactive waste or to operate a new facility. The details of how this system operates are set out in 'Commission Recommendation 1999/829/Euratom of 6 December 1999 on the application of Article 37 of the Euratom Treaty'. This is not part of the Environmental Permitting Regulations.

Commission Recommendation on standard approach to reporting radioactive discharges data (2004/2/Euratom)

5.3. The European Commission has made recommendations for standardised reporting across all Member States; in particular, the way in which values at the limits of detection are reported. Proposed approaches were tested in liaison with the regulators during 2009. The recommendations are to be adopted, in part, by Government through the proposed publication of regulator's guidance to operators in 2010. Should the recommendation become part of a statutory requirement the guidance will need to be revised and the information may be requested by way of permit conditions or other means.

Environmental radiation protection

5.4. It has become increasingly clear that there can be a need for specific assessments of the radiological impact on species other than humans. Assessments are required to provide assurances that the requirements of the Environment Act 1995, and other legislation such as the Conservation (Natural Habitats &c) Regulations 1994 which implement Council Directive 92/43/EEC on "the conservation of natural habitats and of wild fauna and flora", will be met.

5.5. The Environment Agency should therefore consider the need for assessments of potential radiation doses to flora and fauna, prior to granting or varying a permit, and may request an applicant to carry out such assessments. The Environment Agency should contribute, and have regard, to national and international development work on the standards to be applied for protecting non-human species from the harmful effects of ionising radiation.

National Arrangements for Incidents involving Radioactivity

5.6. Participants in the National Arrangements for Incidents involving Radioactivity (NAIR) scheme agree to recover any radioactive materials or waste found in public places. For those participants, the permit conditions relating to storage of waste arising from NAIR incidents should be flexible, so as to appropriately balance the requirements of security and environmental protection, whilst recognising the important contribution of NAIR participants to both of these.

5.7. NAIR participants will need to comply with the dose limits and dose constraints set out in paragraphs 4.8 and 4.9 above.

Effective working with operators

5.8. The Government expects that the Environment Agency should work in an effective manner with all operators, offering advice on technical, compliance and, where appropriate, policy issues (but not legal matters) to operators as appropriate. For this reason, early contact with the Environment Agency by an applicant is desirable. Such contact can lead to efficiencies (time and cost savings) for both the Environment Agency and the applicant. Any advice at, for instance, the pre-application stage will be given by the Environment Agency without prejudice to any future regulatory decisions and without compromising its regulatory independence.

5.9. To support the above contact, the Government expects that the Environment Agency will publish procedural and technical guidance on those matters which it considers necessary from time to time. Operators are encouraged to communicate with the Environment Agency on those issues for which they feel guidance to be necessary, and on matters within existing guidance which could be enhanced or improved. Likely costs incurred by the Environment Agency for guidance should be taken into account when proposing the scale of regulatory charges referred to in the Core Guidance.

5.10. Contact may take place at a corporate level (that is, involving a number of sites under one corporate management) as well as with individual site operators. The former may be more effective and efficient in certain circumstances. Broader contacts may be established through industry or trade associations, or special interest

industry groups concerned with a particular topic of regulatory importance.

5.11. Where the Environment Agency provides pre-application advice then it may make a charge for that advice. The purpose of such advice would be to improve an applicant's understanding of the Environment Agency's expectations and to achieve related environmental benefits. For existing environmental permit holders, the Environment Agency's charges will cover provision of advice on matters relating to the permit. In some cases, an operator might wish to set up a voluntary agreement to allow the Environment Agency to charge for provision of advice on environmental matters not related to an existing environmental permit.

Regulation in collaboration with the Health and Safety Executive and the Office for Nuclear Regulation

5.12. The HSE is responsible for regulation of radioactive substances under the IRR99. The ONR, as an agency within HSE, is responsible for regulation of radioactive materials on nuclear licensed sites under the NIA 65.

5.13. Close collaboration is required between the Environment Agency and HSE and ONR, and this should be consistent with the Government's Better Regulation Agenda. Memoranda of Understanding should be established between both the EA/HSE and EA/ONR.

5.14. The Environment Agency should collaborate with ONR with respect to nuclear sites and with HSE with respect to other users of radioactive material. The regulators should take into account activities that need to be carried out by operators such as ensuring operational safety, prevention of accidents and releases, and routine discharges of radioactivity to the environment, while at the same time, avoiding 'double regulation'. To enable this collaboration, the Environment Agency should:

- agree with ONR and HSE which environmental permit applications and variations are relevant to their respective regulatory regimes and which they wish to be consulted on. For nuclear sites regulated by ONR, the Environment Agency will, in turn, be consulted on any application for a site nuclear licence and on changes to the conditions attached to a nuclear site licence which are relevant to RSR. Where agreed, similar arrangements should apply for operators regulated by HSE;

- so far as possible, arrange for joint inspection visits whenever matters of importance to both regulators are involved;

- so far as possible, align regulatory requirements to ensure consistent requirements are placed on operators and develop procedures to resolve any potential conflicts;

- notify ONR of any matter relating to conditions attached to a nuclear site licence which comes to its attention; reciprocal arrangements also apply;

- notify HSE of any matter relating to conditions attached to an environmental permit that might have implications relevant to IRR99; reciprocal arrangements also apply;

- not unnecessarily apply conditions in permits which are already covered by conditions attached to the nuclear site licence or relate to HSE's regulation under IRR99 (e.g. relating to occupational exposure);

- ensure permit conditions support a common regulatory approach and set common expectations of operators, as far as possible;

- consult ONR on any new or revised guidance for nuclear licensed sites which may be of relevance to ONR duties; reciprocal arrangements also apply;

- consult HSE on any new or revised guidance for non-nuclear users of radioactive material which may be of relevance to HSE duties; reciprocal arrangements also apply;

- for new nuclear installations, arrange (so far as possible) for a single application covering the requirements of both regulatory regimes. (In the case of proposed new nuclear generating capacity, such arrangements are already in place).

Crown exemptions and special arrangements for Ministry of Defence sites

5.15. Whilst the Crown is bound by these Regulations generally, it is not bound by the RSR provisions when carried out on premises used for defence purposes or occupied by visiting forces. Nevertheless, the Ministry of Defence (MoD) voluntarily ensures equivalent compliance with the RSR provisions.

5.16. The Environment Agency should:

- determine applications from MoD in the same way as for non-MoD facilities;
- establish conditions in permissions given to MoD and inspect against these conditions;
- provide advice on compliance to MoD;
- set these matters out in a MoU and working level agreements with the MoD.

Cost recovery on nuclear licensed sites

5.17. For sites licensed under the NIA 65, cost recovery should be based directly on regulatory expenses incurred with respect to the particular site in question. In this case, the Environment Agency should estimate the likely costs on an annual basis and present these estimates to the permit holder prior to any costs being incurred.

5.18. For some nuclear licensed sites and for some issues, the charges can be based at a company, rather than an individual site, level. This approach could lead to efficiency improvements and cost reduction. It may be implemented by the Environment Agency by agreement with the company.

Devolution

5.19. These Regulations apply in England and Wales. The BSSD, other Directives, and UK polices on radioactive wastes are given effect in the devolved administrations through the Radioactive Substances Act 1993 and Directions and guidance given to the environmental regulators in these administrations. The Environment Agency should engage with counterparts in Northern Ireland and Scotland to ensure, so far as possible, that the regulatory approach throughout the UK is harmonised.

Annex 1 – Schedule 23 to the Environmental Permitting Regulations

“SCHEDULE 23 Regulation 35(2)(q)

Radioactive substances activities

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PART 1

Application

Application

1. This Schedule applies in relation to every radioactive substances activity.

PART 2

Interpretation

Interpretation

1.—(1) In this Schedule—

"article" includes a part of an article;

"the Basic Safety Standards Directive" means Council Directive 96/29/EURATOM([6]) laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation;

"Bq" means becquerels;

"contamination" occurs where a substance or article is so affected by—

(a) absorption, admixture or adhesion of radioactive material or radioactive waste; or

(b) the emission of neutrons or ionising radiation,

as to become radioactive or to possess increased radioactivity;

"disposal" in relation to waste includes its removal, deposit, destruction, discharge (whether into water or into the air or into a sewer or drain or otherwise) or burial (whether underground or otherwise) and "dispose of" is to be construed accordingly;

"m", where it appears after a radionuclide, means a radionuclide in a metastable state of radioactive decay in which gamma photons are emitted;

"mobile radioactive apparatus" means any apparatus, equipment, appliance or other thing which is radioactive material and—

(a) is constructed or adapted for being transported from place to place; or

(b) is portable and designed or intended to be used for releasing radioactive material into the environment or introducing it into organisms;

"nuclear site" means—

(a) any site in respect of which a nuclear site licence is for the time being in force; or

(b) any site in respect of which, after the revocation or surrender of a nuclear site licence, the period of responsibility of the licensee has not yet come to an end,

and "licensee", when used in relation to a nuclear site, and "period of responsibility" have the same meaning as in the Nuclear Installations Act 1965([7]);

"premises" includes any land, whether covered by buildings or not, including any place underground and any land covered by water;

"relevant liquid" means a liquid which—

(a) is non-aqueous; or

(b) is classified (or would be so classified in the absence of its radioactivity) under Council Regulation No. 1272/2008([8]) as having any of the following hazard classes and hazard categories (as defined in that Regulation)—

(i) acute toxicity: categories 1, 2 or 3;

(ii) skin corrosion/irritation: category 1 corrosive, sub-categories: 1A, 1B or 1C; or

(iii) hazardous to the aquatic environment: acute category 1 or chronic categories 1 or 2;

"substance" means any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour;

"Table 1", "Table 2", "Table 3" mean the tables with those numbers in Part 3 of this Schedule;

([6]) OJ No L 159, 29.6.1996, p 1.

([7]) 1965 c. 57. Section 5(3) was amended by S.I. 1974/2056, regulation 2 and Schedule 2, paragraph 1.

([8]) OJ No. L 353, 31.12.2008, p.1.

"undertaking" includes any trade, business or profession and—

(a) in relation to a public or local authority, includes any of the powers or duties of that authority, and

(b) in relation to any other body of persons (whether corporate or unincorporate), includes any of the activities of that body; and

"waste" should be construed in accordance with paragraph 3(2).

(2) In this Schedule, where any reference is made to a substance or article possessing a concentration or quantity of radioactivity which exceeds the value specified in a column in either of Tables 1 and 2, or either of Tables 5 and 7 in Part 7 of this Schedule, that value is exceeded if—

(a) where only one radionuclide which is listed or described in the relevant table is present in the substance or article, the concentration or quantity of that radionuclide exceeds the concentration or quantity specified in the appropriate entry of that column in that table; or

(b) where more than one radionuclide which is listed or described in the relevant table is present, the sum of the quotient values of all such radionuclides in the substance or article, as determined by the summation rule following the table (as it applies to that column), is greater than one,

and any reference to a concentration or quantity of radioactivity not exceeding such a value shall be construed accordingly.

Interpretation: NORM industrial activity

2.—(1) Subject to sub-paragraph (2), in this Schedule—

"type 1 NORM industrial activity" means—

(a) the production and use of thorium, or thorium compounds, and the production of products where thorium is deliberately added; or

(b) the production and use of uranium or uranium compounds, and the production of products where uranium is deliberately added; and

"type 2 NORM industrial activity" means—

(a) the extraction, production and use of rare earth elements and rare earth element alloys;

(b) the mining and processing of ores other than uranium ore;

(c) the production of oil and gas;

(d) the removal and management of radioactive scales and precipitates from equipment associated with industrial activities;

(e) any industrial activity utilising phosphate ore;

(f) the manufacture of titanium dioxide pigments;

(g) the extraction and refining of zircon and manufacture of zirconium compounds;

(h) the production of tin, copper, aluminium, zinc, lead and iron and steel;

(i) any activity related to coal mine de-watering plants;

(j) china clay extraction;

(k) water treatment associated with provision of drinking water; or

(l) the remediation of contamination from any type 1 NORM industrial activity or any of the activities listed above.

(2) An activity which involves the processing of radionuclides of natural terrestrial or cosmic origin for their radioactive, fissile or fertile properties is not a type 1 NORM industrial activity or a type 2 NORM industrial activity.

Interpretation: "radioactive material", "radioactive waste" and "waste"

3.—(1) In this Schedule, except as provided by paragraph 7, 8, 9 or 10—

"radioactive material" means a substance or article which is not waste, and which satisfies the requirements of paragraph 4, 5 or 6 as they apply to such a substance or article;

"radioactive waste" means a substance or article which is waste, and which satisfies the requirements of paragraph 4, 5 or 6.

(2) In this Schedule—

(a) "waste" includes—

(i) any substance which constitutes scrap material or an effluent or other unwanted surplus substance arising from the application of any process, and

(ii) any substance or article which requires to be disposed of as being broken, worn out, contaminated or otherwise spoilt;

and

(b) any substance or article which, in the course of carrying on any undertaking, is discharged, discarded or otherwise dealt with as if it were waste is presumed to be waste unless the contrary is proved.

NORM industrial activities

4.—(1) Sub-paragraph (2) applies to a substance or article which—

(a) arises from or is used in a type 1 NORM industrial activity;

(b) is waste which arises from a type 2 NORM industrial activity; or

(c) is contaminated by a substance or article described in paragraph (a) or (b), including where such contamination occurs indirectly through another contaminated substance or article.

(2) A substance or article to which this sub-paragraph applies is radioactive material or radioactive waste where it has a concentration of radioactivity which exceeds the following values in Table 1—

(a) for a substance or article which is a solid or a substance which is a relevant liquid, the value specified in column 2;

(b) for a substance which is any other liquid, the value specified in column 3; or

(c) for a substance which is a gas, the value specified in column 4.

Processed radionuclides of natural terrestrial or cosmic origin

5. A substance or article is radioactive material or radioactive waste where—

(a) the substance or article contains one or more of the radionuclides of natural terrestrial or cosmic origin which are listed in column 1 of Table 2;

(b) the substance or article—

(i) is processed or is intended to be processed for the radioactive, fissile or fertile properties of those radionuclides; or

(ii) is contaminated by a substance or article to which sub-paragraph (i) applies, including where such contamination occurs indirectly through another contaminated substance or article;

and

(c) the substance or article is—

(i) a solid or a relevant liquid and it has a concentration of radioactivity which exceeds the value specified in column 2 of Table 2; or

(ii) any other liquid or a gas.

Radionuclides not of natural terrestrial or cosmic origin

6. A substance or article which contains one or more radionuclides that are not of natural terrestrial or cosmic origin is radioactive material or radioactive waste where—

(a) the substance or article is a solid or a relevant liquid and it has a concentration of radioactivity which exceeds the value specified in column 2 of Table 2; or

(b) the substance is any other liquid or a gas.

Radionuclides with a short half-life

7. A substance or article is not radioactive material or radioactive waste where none of the radionuclides which it contains or which it consists of has a half-life exceeding 100 seconds.

Radionuclides not of natural terrestrial or cosmic origin in background radioactivity

8.—(1) A substance or article is not radioactive material or radioactive waste where—

(a) the substance or article is contaminated as a result of a climatic process, or a combination of such processes, by radionuclides which—

(i) are not of natural terrestrial or cosmic origin; and

(ii) are not present in the substance or article at a concentration that exceeds that found normally in such a substance or article in the United Kingdom;

and

(b) in the absence of such contamination, the substance or article would not otherwise be radioactive material or radioactive waste under this Schedule.

(2) In this paragraph, a "climatic process" includes wind, precipitation and the general circulation of the atmosphere and oceans.

Contaminated substances or articles

9.—(1) Subject to sub-paragraph (2), a substance or article is not radioactive material where—

(a) the substance or article is contaminated, but has not been so contaminated with the intention of utilising its radioactive, fissile or fertile properties; and

(b) in the absence of such contamination, the substance or article would not otherwise be radioactive material under this Schedule.

(2) Sub-paragraph (1) only applies while the substance or article is kept on the premises on which the contamination occurred.

Substances or articles after disposal

10.—(1) A substance or article is not radioactive material or radioactive waste during the excluded period where—

(a) the substance or article has been disposed of lawfully, and at the time of the disposal no further act of disposal is intended in respect of it; or

(b) the substance or article—

(i) is contaminated by a substance or article to which paragraph (a) applies, including where such contamination occurs indirectly through another contaminated substance or article;

(ii) in the absence of such contamination, would not otherwise be radioactive material or radioactive waste under this Schedule; and

(iii) is not contaminated with the intention of using its radioactive, fissile or fertile properties.

(2) In sub-paragraph (1), "the excluded period" means the period—

(a) beginning at the relevant start time; and

(b) ending at the time that there is an increase in the radiation exposure of the public or of any plant or animal which is caused by the substance or article being subject to a process after the relevant start time.

(3) Sub-paragraph (4) applies to a substance or article which—

(a) is disposed of by burial (whether underground or otherwise) on premises in respect of which an environmental permit in respect of the radioactive substances activity in paragraph 11(2)(b) is held at the time of disposal;

(b) is disposed of in accordance with that permit; and

(c) is solid at the time of the disposal.

(4) Where this sub-paragraph applies, the relevant start time is—

(a) where the environmental permit in sub-paragraph (3)(a) is surrendered, the time at which the surrender takes effect; or

(b) where that permit is revoked and—

(i) regulation 23 applies to that permit, the time at which the regulator issues the certificate described in paragraph (4) or (6) of that regulation; or

(ii) regulation 23 does not apply to that permit, the time at which the revocation takes effect.

(5) Sub-paragraph (6) applies to a substance or article ("A") described in sub-paragraph (1)(b), where the substance or article ("B") which contaminates it (directly or indirectly) is described in sub-paragraph (3).

(6) Where this sub-paragraph applies, the relevant start time for A is the later of—

(a) the time at which A becomes contaminated; and

(b) the relevant start time for B.

(7) In respect of a substance or article ("C") to which sub-paragraphs (4) and (6) do not apply, the relevant start time is—

(a) where sub-paragraph (1)(a) applies to C, the time at which C is disposed of; or

(b) where sub-paragraph (1)(b) applies to C, the time at which C becomes contaminated.

Interpretation: radioactive substances activity

11.—(1) Subject to paragraphs 12 and 13, "radioactive substances activity" means an activity described in sub-paragraph (2), (4), (5) or (6).

(2) A radioactive substances activity is carried on where a person uses premises for the purposes of an undertaking and that person—

(a) except where sub-paragraph (5) applies, keeps or uses radioactive material on those premises;

(b) disposes of radioactive waste on or from those premises; or

(c) accumulates radioactive waste on those premises,

knowing or having reasonable grounds for believing the material or waste to be radioactive material or radioactive waste.

(3) For the purposes of sub-paragraph (2)(c), where—

(a) radioactive material is produced, kept or used on any premises;

(b) any substance arising from the production, keeping or use of that material is accumulated in a part of the premises appropriated for the purpose; and

(c) that substance is retained there for a period of not less than 3 months,

that substance, unless the contrary is proved, is presumed to be radioactive waste.

(4) A radioactive substances activity is carried on where, in the course of a person carrying on an undertaking, that person—

(a) receives radioactive waste for the purposes of disposing of that waste; and

(b) knows or has reasonable grounds for believing the waste to be radioactive waste.

(5) A radioactive substances activity is carried on where a person keeps or uses mobile radioactive apparatus for—

(a) testing, measuring or otherwise investigating any of the characteristics of substances or articles; or

(b) releasing quantities of radioactive material into the environment or introducing such material into organisms.

(6) A radioactive substances activity is carried on where a person carries out intrusive investigation work or other excavation, construction or building work—

(a) to determine the suitability of any premises; or

(b) to enable the use of any premises,

as a place that may be used wholly or substantially for underground disposal.

(7) In sub-paragraph (6)—

"intrusive investigation work" means the drilling of boreholes into, or excavation of, sub-soil or rock to determine geological or hydrogeological conditions; and

"underground disposal" means—

(a) the disposal of solid radioactive waste in an engineered facility, or in part of an engineered facility, which is beneath the surface of the ground, and

(b) where the natural environment which surrounds the facility acts, in combination with any engineered measures, to inhibit the transit of radionuclides from the facility to the surface,

and does not include the disposal of radioactive waste in a facility which is beneath the surface of the ground only by virtue of the placing of rocks or soil above it.

Nuclear sites

12.—(1) Paragraph 11(2)(a) does not apply to the activity carried on by a licensee of a nuclear site on any premises situated on that site at any time—

(a) while a nuclear site licence is in force in respect of that site; and

(b) after the revocation or surrender of such a licence but before the period of responsibility of the licensee has come to an end.

(2) In respect of any premises which—

(a) are situated on a nuclear site; but

(b) have ceased to be used for the purposes of an undertaking carried on by the licensee,

paragraph 11(2)(b) applies to those premises as if the premises were used for the purposes of an undertaking carried on by the licensee.

(3) Paragraph 11(2)(c) does not apply to the accumulation of radioactive waste on any premises situated on a nuclear site.

Vehicles, vessels and aircraft

13. In determining whether any radioactive material is kept or used on any premises, no account must be taken of any radioactive material kept or used in or on any railway vehicle, road vehicle, vessel or aircraft if—

(a) the vehicle, vessel or aircraft is on the premises in the course of a journey; or

(b) in the case of a vessel which is on those premises otherwise than in the normal course of a journey, the material is used in propelling the vessel or is kept in or on the vessel for use in propelling it.

PART 3

Tables of radionuclides and summation rules

Table 1

1. The Table 1 referred to in paragraph 4 (NORM industrial activities) of Part 2 is—

Table 1

Concentration of radionuclides: NORM industrial activities

Radionuclide	*Solid or relevant liquid concentration in becquerels per gram (Bq/g)*	*Any other liquid concentration in becquerels per litre (Bq/l)*	*Gaseous concentration in becquerels per cubic metre (Bq/m^3)*
U-238sec([9])	0.5	0.1	0.001
U-238+	5	10	0.01
U-234	5	10	0.01
Th-230	10	10	0.001
Ra-226+	0.5	1	0.01
Pb-210+	5	0.1	0.01
Po-210	5	0.1	0.01
U-235sec	1	0.1	0.0001
U-235+	5	10	0.01
Pa-231	5	1	0.001
Ac-227+	1	0.1	0.001
Th-232sec	0.5	0.1	0.001
Th-232	5	10	0.001
Ra-228+	1	0.1	0.01
Th-228+	0.5	1	0.001

2. The Table 1 summation rule in respect of column 2, 3 or 4 means the sum of the quotients A/B where—

(a) "A" means the concentration of each radionuclide listed in column 1 of Table 1 that is present in the substance or article; and

(b) "B" means the concentration of that radionuclide specified in column 2, 3 or 4 (as appropriate) of Table 1.

Table 2

3. The Table 2 referred to in paragraphs 5 (processed radionuclides of natural terrestrial or cosmic origin) and 6 (radionuclides not of natural terrestrial or cosmic origin) of Part 2 is—

Table 2

Concentration of radionuclides

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
H-3	10^2
Be-7	10
C-14	10
F-18	1

([9]) For the meaning of 'sec' and '+' in this part see paragraph 5.

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Na-22	0.1
Na-24	0.1
Si-31	10^2
P-32	10^2
P-33	10^2
S-35	10^2
Cl-36	1
Cl-38	1
K-42	10
K-43	1
Ca-45	10^2
Ca-47	1
Sc-46	0.1
Sc-47	10
Sc-48	0.1
V-48	0.1
Cr-51	10
Mn-51	1
Mn-52	0.1
Mn-52m	1
Mn-53	10^3
Mn-54	0.1
Mn-56	1
Fe-52+	1
Fe-55	10^2
Fe-59	0.1
Co-55	1
Co-56	0.1
Co-57	1
Co-58	0.1
Co-58m	10^2
Co-60	0.1
Co-60m	10^3
Co-61	10^2
Co-62m	1
Ni-59	10^2
Ni-63	10^2
Ni-65	1
Cu-64	10
Zn-65	1
Zn-69	10^2
Zn-69m+	1
Ga-72	1
Ge-71	10^4
As-73	10^2
As-74	1
As-76	1
As-77	10^2
Se-75	1
Br-82	0.1
Rb-86	10

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Sr-85	1
Sr-85m	10
Sr-87m	10
Sr-89	10
Sr-90+	1
Sr-91+	1
Sr-92	1
Y-90	10^2
Y-91	10
Y-91m	1
Y-92	10
Y-93	10
Zr-93	10
Zr-95+	0.1
Zr-97+	1
Nb-93m	10^2
Nb-94	0.1
Nb-95	1
Nb-97+	1
Nb-98	1
Mo-90	1
Mo-93	10
Mo-99+	1
Mo-101+	1
Tc-96	0.1
Tc-96m	10
Tc-97	10
Tc-97m	10
Tc-99	1
Tc-99m	10^2
Ru-97	1
Ru-103+	1
Ru-105+	1
Ru-106+	1
Rh-103m	10^4
Rh-105	10
Pd-103+	10^3
Pd-109+	10^2
Ag-105	1
Ag-108m+	0.1
Ag-110m+	0.1
Ag-111	10
Cd-109+	10
Cd-115+	1
Cd-115m+	10
In-111	1
In-113m	10
In-114m+	1
In-115m	10
Sn-113+	1
Sn-125	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Sb-122	1
Sb-124	0.1
Sb-125+	1
Te-123m	1
Te-125m	10^2
Te-127	10^2
Te-127m+	10
Te-129	10
Te-129m+	10
Te-131	10
Te-131m+	1
Te-132+	0.1
Te-133+	1
Te-133m+	1
Te-134	1
I-123	10
I-125	1
I-126	1
I-129	0.1
I-130	1
I-131+	1
I-132	1
I-133	1
I-134	1
I-135	1
Cs-129	1
Cs-131	10^3
Cs-132	1
Cs-134	0.1
Cs-134m	10^3
Cs-135	10
Cs-136	0.1
Cs-137+	1
Cs-138	1
Ba-131	1
Ba-140	0.1
La-140	0.1
Ce-139	1
Ce-141	10
Ce-143	1
Ce-144+	10
Pr-142	10
Pr-143	10^2
Nd-147	10
Nd-149	10
Pm-147	10^2
Pm-149	10^2
Sm-151	10^2
Sm-153	10
Eu-152	0.1
Eu-152m	10

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Eu-154	0.1
Eu-155	10
Gd-153	10
Gd-159	10
Tb-160	0.1
Dy-165	10^2
Dy-166	10
Ho-166	10
Er-169	10^2
Er-171	10
Tm-170	10
Tm-171	10^2
Yb-175	10
Lu-177	10
Hf-181	1
Ta-182	0.1
W-181	10
W-185	10^2
W-187	1
Re-186	10^2
Re-188	10
Os-185	1
Os-191	10
Os-191m	10^3
Os-193	10
Ir-190	0.1
Ir-192	0.1
Ir-194	10
Pt-191	1
Pt-193m	10^2
Pt-197	10^2
Pt-197m	10^2
Au-198	1
Au-199	10
Hg-197	10
Hg-197m	10
Hg-203	1
Tl-200	1
Tl-201	10
Tl-202	1
Tl-204	10
Pb-203	1
Pb-210+	0.01
Pb-212+	1
Bi-206	0.1
Bi-207	0.1
Bi-210	10
Bi-212+	1
Po-203	1
Po-205	1
Po-207	1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Po-210	0.01
At-211	10^2
Ra-223+	1
Ra-224+	1
Ra-225	1
Ra-226+	0.01
Ra-227	10
Ra-228+	0.01
Ac-227+	0.01
Ac-228	1
Th-226+	10^2
Th-227	1
Th-228+	0.1
Th-229+	0.1
Th-230	0.1
Th-231	10^2
Th-232	0.01
Th-232+	0.01
Th-232sec	0.01
Th-234+	10
Pa-230	1
Pa-231	0.01
Pa-233	1
U-230+	1
U-231	10
U-232+	0.1
U-233	1
U-234	1
U-235+	1
U-235sec	0.01
U-236	1
U-237	10
U-238+	1
U-238sec	0.01
U-239	10^2
U-240+	10
Np-237+	0.1
Np-239	10
Np-240	1
Pu-234	10^2
Pu-235	10^2
Pu-236	0.1
Pu-237	10
Pu-238	0.1
Pu-239	0.1
Pu-240	0.1
Pu-241	1
Pu-242	0.1
Pu-243	10^2
Pu-244+	0.1
Am-241	0.1

Radionuclide	*Concentration in becquerels per gram (Bq/g)*
Am-242	10^2
Am-242m+	0.1
Am-243+	0.1
Cm-242	1
Cm-243	0.1
Cm-244	0.1
Cm-245	0.1
Cm-246	0.1
Cm-247+	0.1
Cm-248	0.1
Bk-249	10
Cf-246	10
Cf-248	1
Cf-249	0.1
Cf-250	0.1
Cf-251	0.1
Cf-252	0.1
Cf-253	1
Cf-253+	1
Cf-254	0.1
Es-253	1
Es-254+	0.1
Es-254m+	1
Fm-254	10^2
Fm-255	10
Any other solid or non-aqueous liquid radionuclide that is not of natural terrestrial or cosmic origin	0.01 or that concentration which gives rise to a dose to a member of the public of 10 microsieverts per year calculated by reference to guidance by Euratom in RP 122 part 1([10]).

4. The Table 2 column 2 summation rule means the sum of the quotients A/B where—

(a) "A" means the concentration of each radionuclide listed in column 1 of Table 2 that is present in the substance or article, and

(b) "B" means the concentration of that radionuclide specified in column 2 of Table 2.

References in Table 1 and Table 2 to + and sec

5. Where any radionuclide carries the suffix "+" or "sec" in Table 1 or Table 2—

(a) that radionuclide represents the parent radionuclide in secular equilibrium with the corresponding daughter radionuclides which are identified in column 2 of Table 3 in respect of that parent radionuclide; and

(b) a concentration value given in a table in this Part in respect of such a parent radionuclide is the value for the parent radionuclide alone, but already takes into account the daughter radionuclides present.

([10]) EC 2000. Radiation Protection 122: Practical use of the concepts of clearance and exemption, Part 1. Report RP122 Luxembourg. European Commission.

Table 3

6. The Table 3 referred to in paragraph 5 is—

Table 3

Radionuclides in secular equilibrium

Parent radionuclide	*Daughter radionuclides*
Fe-52+	Mn-52m
Zn-69m+	Zn-69
Sr-90+	Y-90
Sr-91+	Y-91m
Zr-95+	Nb-95m
Zr-97+	Nb-97m, Nb-97
Nb-97+	Nb-97m
Mo-99+	Tc-99m
Mo-101+	Tc-101
Ru-103+	Rh-103m
Ru-105+	Rh-105m
Ru-106+	Rh-106
Pd-103+	Rh-103m
Pd-109+	Ag-109m
Ag-108m+	Ag-108
Ag-110m+	Ag-110
Cd-109+	Ag-109m
Cd-115+	In-115m
Cd-115m+	In-115m
In-114m+	In-114
Sn-113+	In-113m
Sb-125+	Te-125m
Te-127m+	Te-127
Te-129m+	Te-129
Te-131m+	Te-131
Te-132+	I-132
Te-133+	I-133, Xe-133m, Xe-133
Te-133m+	Te-133, I-133, Xe-133m, Xe-133
I-131+	Xe-131m
Cs-137+	Ba-137m
Ce-144+	Pr-144, Pr-144m
Pb-210+	Bi-210, Po-210
Pb-212+	Bi-212, Tl-208
Bi-212+	Tl-208
Ra-223+	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224+	Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Ra-226+	Rn-222, Po-218, Pb-214, Bi-214, Po-214
Ra-228+	Ac-228
Ac-227+	Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
Th-226+	Ra-222, Rn-218, Po-214
Th-228+	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
Th-229+	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Tl-209, Pb-209
Th-232+	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208

Parent radionuclide	*Daughter radionuclides*
Th-232sec	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208
Th-234+	Pa-234m, Pa-234
U-230+	Th-226, Ra-222, Rn-218, Po-214
U-232+	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208
U-235+	Th-231
U-235sec	Th-231, Pa-231, Ac-227, Th-227, Fr-223, Ra-223, Rn-219, Po-215, Pb-211, Bi-211, Tl-207, Po-211
U-238+	Th-234, Pa-234m, Pa-234
U-238sec	Th-234, Pa-234m, Pa-234, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
U-240+	Np-240m, Np-240
Np-237+	Pa-233
Pu-244+	U-240, Np-240m, Np-240
Am-242m+	Np-238
Am-243+	Np-239
Cm-247+	Pu-243
Cf-253+	Cm-249
Es-254+	Bk-250
Es-254m+	Fm-254

PART 4

The Basic Safety Standards Directive

SECTION 1

Exposures and doses

Optimisation and dose limits

1. In respect of a radioactive substances activity that relates to radioactive waste, the regulator must exercise its relevant functions to ensure that—

(a) all exposures to ionising radiation of any member of the public and of the population as a whole resulting from the disposal of radioactive waste are kept as low as reasonably achievable, taking into account economic and social factors; and

(b) the sum of the doses resulting from the exposure of any member of the public to ionising radiation does not exceed the dose limits set out in Article 13 of the Basic Safety Standards Directive subject to the exclusions set out in Article 6(4) of that Directive.

Specific dose limits and calculation

2.—(1) In exercising those relevant functions in relation to the planning stage of radiation protection, the regulator must have regard to the following maximum doses to individuals which may result from a defined source—

(a) 0.3 millisieverts per year from any source from which radioactive discharges are first made on or after 13th May 2000; or

(b) 0.5 millisieverts per year from the discharges from any single site.

(2) In exercising those relevant functions, the regulator must observe the requirements of the following provisions of the Basic Safety Standards Directive—

(a) in estimating effective dose and equivalent dose, Articles 15 and 16;

(b) in estimating population doses, Article 45; and

(c) in relation to the responsibilities of undertakings, Article 47.

SECTION 2

Interventions

Radioactive waste: power of the Secretary of State to provide facilities for disposal or accumulation

3.—(1) If it appears to the Secretary of State that adequate facilities are not available for the safe disposal or accumulation of radioactive waste, the Secretary of State may—

(a) provide such facilities; or

(b) make arrangements for their provision by such persons as the Secretary of State may think fit.

(2) Before exercising the power under sub-paragraph (1), the Secretary of State must consult with—

(a) any local authority in whose area the facilities would be situated; and

(b) such other public or local authorities (if any) as appear to the Secretary of State to be proper to be consulted.

(3) Reasonable charges for the use of any facilities provided under sub-paragraph (1) may be made by—

(a) the Secretary of State; or

(b) the person providing such facilities, unless the arrangements made by the Secretary of State with that person provide to the contrary.

Radioactive waste: power of disposal by the regulator

4.—(1) Sub-paragraph (2) applies if there is radioactive waste on any premises and the regulator is satisfied that the waste ought to be disposed of but that it is unlikely that the waste will be lawfully disposed of—

(a) because the premises are unoccupied;

(b) because the occupier is absent or insolvent; or

(c) for any other reason.

(2) The regulator may dispose of the waste and recover any expenses it reasonably incurs in that disposal from—

(a) the occupier of the premises; or

(b) if the premises are unoccupied, the owner of the premises.

(3) In sub-paragraph (2)—

(a) "owner" has the same meaning as in section 343 of the Public Health Act 1936([11]); and

(b) the provisions of section 294 of that Act (which limits the liability of owners who are only agents or trustees) apply but as if reference in that section to a council recovering expenses under that Act were to the regulator recovering expenses under sub-paragraph (2).

([11]) 1936 c. 49.

PART 5

The HASS Directive

SECTION 1

Security of sources

Interpretation

1. In this Part—

"the HASS Directive" means Council Directive 2003/122/EURATOM([12]) on the control of high-activity sealed radioactive sources and orphan sources;

"high-activity or similar source" means—

(a) a high-activity source; or

(b) such other sealed source which, in the opinion of the regulator, is of a similar level of potential hazard to a high-activity source;

"high-activity source" has the same meaning as in the HASS Directive but excluding any such source once its activity level has fallen below the exemption levels specified in column 2 of Table A to Annex I to the Basic Safety Standards Directive;

"orphan source" has the same meaning as in the HASS Directive; and

"sealed source" has the same meaning as in the HASS Directive.

Site security: inspection

2.—(1) In exercising relevant functions in relation to a radioactive substances activity, the regulator must comply with sub-paragraph (3) where a high-activity or similar source is, or will be, kept, used, disposed of or accumulated on any premises.

(2) Sub-paragraph (1) does not apply where the premises are, or are part of, a nuclear site.

(3) In considering if the measures taken, or to be taken, by the operator ensure the adequate security of any premises, the regulator must where appropriate inspect those premises.

(4) Where the regulator inspects any premises under sub-paragraph (3), it may be accompanied by such other persons as are appropriate to assist it in assessing the measures.

(5) An operator must permit the regulator (and any person accompanying it) reasonable access to any premises the regulator wishes to inspect under sub-paragraph (3).

(6) If the operator fails to comply with sub-paragraph (5), the regulator may refuse the application or revoke the permit insofar as it relates to the sources referred to in sub-paragraph (1).

Site security: security measures and advice

3.—(1) In exercising relevant functions in relation to a radioactive substances activity, the regulator must comply with sub-paragraph (2) where a high-activity or similar source is, or will be, kept, used, disposed of or accumulated on any premises.

(2) The regulator—

(a) must satisfy itself that there are in place measures concerning site security, including the security measures in sub-paragraph (3), as are appropriate to the source and premises in question;

(b) where it considers it appropriate to do so, must consult the police, security services or other appropriate persons on site security;

(c) must have regard to any advice given by them, if it is issued within such time as the regulator believes is reasonable before it exercises a relevant function; and

(d) must impose appropriate environmental permit conditions concerning site security.

([12]) OJ No L 346, 31.12.2003, p 57.

(3) The security measures referred to in sub-paragraph (2)(a) are—

(a) measures to ensure the physical security of the premises, including the installation of alarm and detection systems, and the retaining of documentary evidence of those measures;

(b) measures, which are evidenced in writing—

(i) to prevent unauthorised access to, or loss or theft of, a high-activity or similar source;

(ii) to detect such matters; and

(iii) to review and enhance the physical security of the premises in response to any increased risk of unauthorised access, loss or theft;

(c) written procedures to ensure that before a person is authorised to have access to a high-activity or similar source—

(i) that person has passed checks to verify their identity, and

(ii) satisfactory written references have been obtained which confirm, as far as reasonably practicable, that there is no information to indicate that the person presents any security risk to the sources; and

(d) measures to keep secure, and prevent unauthorised access to, information relating to—

(i) a high-activity or similar source, and

(ii) the measures referred to in paragraphs (a), (b) and (c).

SECTION 2

Advice and assistance in relation to orphan sources

Advice and assistance in respect of orphan sources

4.—(1) The relevant person must ensure that specialised technical advice and assistance is promptly made available to persons who—

(a) are not normally involved in operations subject to radiation protection requirements, and

(b) suspect the presence of an orphan source.

(2) The relevant person must ensure that the primary aim of such advice and assistance is—

(a) the safety of the source; and

(b) protecting the public and workers from radiation.

(3) The relevant person means—

(a) in relation to the protection of workers, the Secretary of State;

(b) in relation to the protection of the public (other than workers)—

(i) in England, the Secretary of State,

(ii) in Wales, the Welsh Ministers.

SECTION 3

Exercise of relevant functions and matters in relation to orphan sources

General

5.—(1) In exercising relevant functions in relation to a radioactive substances activity, the regulator must comply with the following provisions of the HASS Directive—

(a) Article 3(2) and (3);

(b) Article 4;

(c) Article 5(1) and (2);

(d) Article 6;

(e) subject to sub-paragraph (2), Article 7(1) and (2).

(2) In relation to a high-activity source placed on the market before 31st December 2005, sub-paragraph (1)(e) has effect as if it referred to the provisions contained in Article 16(1)(b) of the HASS Directive.

Records and inspections

6. In relation to a high-activity source, the regulator must—

(a) keep records of those matters—

(i) required by Article 5(3) and (4) of the HASS Directive; and

(ii) notified to it under Article 6 of that Directive;

and

(b) establish or maintain a system of inspections to enforce the following provisions of the HASS Directive—

(i) Articles 3 to 6;

(ii) as appropriate, Article 7(1) and (2) or Article 16(1)(b).

Training and information

7.—(1) In relation to a high-activity source, the appropriate training and adequate information required by the Ionising Radiations Regulations 1999([13]) must include—

(a) specific requirements for the safe management of such a source;

(b) particular emphasis on the necessary safety requirements in relation to such a source; and

(c) specific information on possible consequences of the loss of adequate control of such a source.

(2) The training and information on the matters in sub-paragraph (1) must be repeated at regular intervals and documented, with a view to preparing the employees and other persons referred to in those Regulations for such matters.

Orphan sources

8.—(1) The regulator must—

(a) be prepared, or have made provision (including the assignment of responsibilities), to recover any orphan source; and

(b) have drawn up appropriate response plans and measures.

(2) The regulator may recover any expenses reasonably incurred by it in the recovery and disposal of an orphan source from—

(a) the person carrying on the radioactive substances activity involving that source; or

(b) the occupier or owner of the premises where the source is located.

(3) In relation to sub-paragraph (2)—

(a) "owner" has the same meaning as in section 343 of the Public Health Act 1936([14]); and

(b) the provisions of section 294 of that Act (which limits the liability of owners who are only agents or trustees) apply but as if reference in that section to a council recovering expenses under that Act were to the regulator recovering expenses under sub-paragraph (2).

([13]) S.I. 1999/3232.
([14]) 1936 c. 49.

PART 6

Conditions in environmental permits

Posting on premises of environmental permits

1.—(1) Subject to sub-paragraph (3), the regulator must impose environmental permit display conditions on an environmental permit granted under these Regulations if the permit—

(a) relates to a radioactive substances activity described in paragraph 11(2) of Part 2 of this Schedule; and

(b) does not relate to a sealed source.

(2) Where an existing radioactive substances permit—

(a) becomes an environmental permit by virtue of regulation 69(a); and

(b) does not relate to a sealed source,

the environmental permit has effect subject to environmental permit display conditions in addition to any conditions that apply to it by virtue of regulation 69(b).

(3) The regulator, if required to do so on the grounds of national security by any direction issued to it under these Regulations or under any other enactment—

(a) must vary or revoke environmental permit display conditions or any similar environmental permit conditions that applied to an existing radioactive substances permit at the relevant time; or

(b) must not impose such conditions.

(4) In this paragraph—

"environmental permit display conditions" means a requirement that the operator—

(a) keep copies of the permit posted on the premises, and

(b) post the permit in such characters and positions as to be conveniently read by persons who have duties on the premises which are or could be affected by the matters set out in the permit; and

"existing radioactive substances permit" means—

(a) an authorisation under section 13 or 14 of the 1993 Act, or

(b) a registration under section 7 of the 1993 Act.

PART 7

Radioactive substances activity exemptions

SECTION 1

General

Interpretation

1. In this Part—

"Ba-137m eluting source" means a source which consists of Cs-137 in a sealed container which is designed and constructed to allow the elution of Ba-137m, and which is radioactive material or radioactive waste solely because of that Cs-137;

"Class A gaseous tritium light device" means a gaseous tritium light device where the activity of the device does not exceed 2×10^{10} Bq of tritium;

"Class B gaseous tritium light device" means a gaseous tritium light device which is installed or intended to be installed on premises and where the activity—

(a) in each sealed container in the device does not exceed 8×10^{10} Bq of tritium; and

(b) of the device does not exceed 1×10^{12} Bq of tritium;

"Class C gaseous tritium light device" means a gaseous tritium light device installed or intended to be installed—

(a) in a vessel or aircraft; or

(b) in a vehicle or other equipment used or intended to be used by the armed forces of the Crown;

"disposal permit" means—

(a) an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) of Part 2 of this Schedule; or

(b) an authorisation under the 1993 Act to dispose of radioactive waste held in respect of premises situated in Northern Ireland or Scotland;

"electrodeposited source" means an article where radionuclides are electrodeposited onto a metal substrate and which is radioactive material or radioactive waste solely because it contains Ni-63 or Fe-55;

"gaseous tritium light device" means a sealed source in a device which is an illuminant, instrument, sign or indicator which—

(a) incorporates tritium in one or more sealed containers constructed to prevent dispersion of that tritium in normal use; and

(b) is radioactive material solely because it contains that tritium;

"luminised article" means an article which is made wholly or partly from a luminescent substance in the form of a film or a paint and which—

(a) is radioactive material or radioactive waste solely because it contains Pm-147 or H-3; and

(b) is not a sealed source;

"management", in respect of waste, means—

(a) the preparation by checking, cleaning or repairing that waste for its re-use without further processing;

(b) the recovery of that waste;

(c) the disposal of that waste; or

(d) the application of any treatment process to that waste which is preparatory to the recovery or disposal of it,

and cognate expressions shall be construed accordingly;

"relevant river" means a river or a part of a river which—

(a) is not a part of the sea; and

(b) at the place and time of any disposal into it of aqueous radioactive waste from a sewage disposal works or directly from premises, has a flow-rate which is not less than $1m^3s^{-1}$;

"relevant sewer" means—

(a) a public sewer; or

(b) a disposal main which leads to a sewage disposal works that—

(i) has the capacity to handle a minimum of $100m^3$ of effluent per day; and

(ii) discharges treated effluent only to the sea or to a relevant river,

and "public sewer", "disposal main", "sewage disposal works" and "effluent" have the same meaning as in the Water Industry Act 1991([15]);

"relevant standard conditions" has the meaning given in paragraph 10;

"sea" includes any area submerged at mean high water springs and also includes, so far as the tide flows at mean high water springs, an estuary or arm of the sea and the waters of any channel, creek, bay or river;

([15]) 1991 c. 56; the definition of public sewer was amended by the Water Act 2003 (c. 37).

"sealed source" means a radioactive source containing radioactive material where the structure is designed to prevent, under normal use, any dispersion of radioactive substances, excluding such a source where it is an electrodeposited source or a tritium foil source;

"stored in transit" means the storage in the course of transit of radioactive material or radioactive waste but does not include any storage of such material or waste where it is removed from its container;

"Table 4", "Table 5", "Table 6", "Table 7" or "Table 8" means the table with that number in this Part;

"a tritium foil source" means an article which—

(a) has a mechanically tough surface into which tritium is incorporated; and

(b) is radioactive material or radioactive waste solely because of that tritium;

"uranium or thorium compound" means a substance or article which is radioactive material or radioactive waste solely because it is or contains metallic uranium or thorium or prepared compounds of uranium or thorium, and in respect of which metal or compound the proportion of—

(a) U-235 in the uranium it contains is no more than 0.72% by mass; and

(b) any isotope of thorium it contains is present in the isotopic proportions found in nature;

"waste permitted person" means, in relation to the radioactive waste where the term appears, a person who holds—

(a) an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) or (c) of Part 2 of this Schedule; or

(b) in respect of premises in Scotland or Northern Ireland, an authorisation under section 13 or 14 of the 1993 Act;

"week" means any period of seven consecutive days; and

"year" means a calendar year.

Interpretation: NORM

2.—(1) In this Part, "NORM waste" means a substance or article which is solid radioactive waste under—

(a) paragraph 4 of Part 2 of this Schedule; or

(b) except where sub-paragraph (2) applies, paragraph 5 of that Part where the waste arises from the remediation of land.

(2) Land is not contaminated under sub-paragraph (1)(b) where the land is on a site in respect of which a nuclear site licence is or has been in force and the contamination occurred—

(a) when that licence was in force; or

(b) before that licence was granted, when the site was used for the purpose of installing or operating an installation described in subsection (1) of section 1 of the Nuclear Installations Act 1965([16]) (restriction of certain nuclear installations to licensed sites) or in regulations made under that subsection.

(3) In these Regulations, "NORM waste concentration" means, in respect of radionuclides contained in NORM waste, the sum of the concentrations of the single radionuclide with the highest concentration in each of the natural decay chains beginning with—

(a) U-238;

(b) U-235; and

(c) Th-232.

([16]) 1965 c.57, as relevantly amended by S.I. 1974/2056 and 1990/1918, Schedule 1, paragraph 1.

SECTION 2

Exemption for keeping and using radioactive material and accumulating radioactive waste

Exemption for keeping and using radioactive material

3.—(1) A person ("A") is exempt from the requirement for an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(a) of Part 2 of this Schedule in respect of—

(a) subject to sub-paragraph (2), the radioactive material described in paragraph 5, where A complies with the relevant standard conditions and—

(i) in respect of radioactive material described in paragraph 5(1)(a), the condition in paragraph 6(1); and

(ii) in respect of radioactive material described in paragraph 5(1)(b), the condition in paragraph 6(2);

or

(b) radioactive material stored in transit.

(2) A is not exempt from the requirement for an environmental permit under sub-paragraph (1)(a) in respect of a high activity source where A takes possession of it.

Exemption for accumulating radioactive waste

4.—(1) This paragraph applies to the following radioactive substances activities—

(a) the activity described in paragraph 11(2)(c) of Part 2 of this Schedule ("Activity A"); and

(b) the activity described in paragraph 11(4) of Part 2 of this Schedule ("Activity B").

(2) In this paragraph, "paragraph 5 waste" means radioactive waste described in paragraph 5.

(3) A person ("A") is exempt from the requirement for an environmental permit to carry on Activity A or B, in respect of radioactive waste which is stored in transit.

(4) Subject to sub-paragraph (5), a person ("B") is exempt from the requirement for an environmental permit to carry on Activity A or B in respect of paragraph 5 waste where—

(a) B receives that waste for accumulation on premises (with a view to its subsequent management by B on those premises);

(b) in respect of those premises B manages substantial quantities of waste which is not radioactive waste; and

(c) the management of the radioactive waste will be completed by B as soon as is reasonably practicable, with the radioactive waste dispersed in non-radioactive waste.

(5) B is not exempt under sub-paragraph (4) from the requirement for an environmental permit to carry on Activity B where the waste received by B is or contains a high-activity source.

(6) A person ("C") is exempt from the requirement for an environmental permit to carry on Activity A in respect of paragraph 5 waste, where C complies with the relevant standard conditions and—

(a) in respect of radioactive waste described in paragraph 5(1)(a), the condition in paragraph 6(1); and

(b) in respect of radioactive waste described in paragraph 5(1)(b), the condition in paragraph 6(2).

(7) A person ("D") is exempt from the requirement for an environmental permit to carry on Activity A in respect of radioactive waste which is a sealed source, an electrodeposited source or a tritium foil source which—

(a) contains a quantity of radionuclides which exceeds the value specified in column 2 of Table 4 in respect of the relevant type of source;

(b) immediately before it became radioactive waste, was radioactive material in the form of a sealed source, an electrodeposited source or a tritium foil source (as appropriate); and

(c) has not been received by D for the purpose of D disposing of it,

where D complies with the relevant standard conditions.

Radioactive substances exempted under paragraphs 3 and 4

5.—(1) Subject to sub-paragraph (2), paragraphs 3(1)(a) and 4(4) and (6) apply to—

(a) a substance or article described in an entry in column 1 of Table 4 which contains a quantity of radionuclides that does not exceed the value specified in column 2 of Table 4 in respect of that substance or article; or

(b) any substance or article which is not described in an entry in column 1 of Table 4.

(2) Sub-paragraph (1) does not apply to NORM waste with a NORM waste concentration which is less than or equal to 10 Bq/g.

Conditions in respect of the total quantity or concentration of radioactive substances on any premises

6.—(1) The condition referred to in paragraphs 3(1)(a)(i) and 4(6)(a) is that, in respect of the total amount of a substance or article described in paragraph 5(1)(a) (including any mobile radioactive apparatus) on the premises, the quantity of radionuclides must not exceed the value specified for that substance or article in column 3 of Table 4.

(2) The condition referred to in paragraphs 3(1)(a)(ii) and 4(6)(b) in respect of a substance or article described in paragraph 5(1)(b) is that—

(a) in respect of the total amount of such substances and articles on the premises, the quantity of radioactivity does not exceed the value specified in column 2 of Table 5; or

(b) no such substance or article on the premises contains a concentration of radioactivity that exceeds the value specified in column 3 of Table 5.

Exemption for accumulating NORM waste

7.—(1) This paragraph applies—

(a) to the following radioactive substances activities—

(i) the activity described in paragraph 11(2)(c) of Part 2 of this Schedule ("Activity A");

(ii) the activity described in paragraph 11(4) of Part 2 of this Schedule ("Activity B");

and

(b) where Activity A or B is carried on in respect of NORM waste with a NORM waste concentration that does not exceed 10 Bq/g ("Qualifying NORM Waste").

(2) Subject to sub-paragraph (5) where it applies, a person ("A") is exempt from the requirement for an environmental permit to carry on Activity A or Activity B in respect of Qualifying NORM Waste, where another person ("B") transfers that waste to A—

(a) in accordance with—

(i) a disposal permit held by B; or

(ii) an exemption from holding such a permit that applied to B in respect of the transfer to A;

and

(b) for the purpose of its accumulation by A with a view to its subsequent management by A on the premises on which it is received by A.

(3) Subject to sub-paragraph (5) where it applies, a person ("C") is exempt from the requirement for an environmental permit to carry on Activity A in respect of Qualifying NORM Waste where C complies with the relevant standard conditions.

(4) Sub-paragraph (5) applies to a person ("D") who holds an environmental permit to carry on Activity A on premises ("the relevant premises") in respect of NORM waste with a NORM waste concentration which is more than 10 Bq/g.

(5) The exemptions in sub-paragraphs (2) and (3) do not apply to D in respect of Qualifying NORM waste—

(a) with a NORM waste concentration which exceeds 5 Bq/g; and

(b) which is accumulated on the relevant premises.

SECTION 3

Exemption for keeping or using mobile radioactive apparatus

Exemption for keeping or using mobile radioactive apparatus

8.—(1) A person ("A") is exempt from the requirement for an environmental permit to carry on the radioactive substances activity described in paragraph 11(5) of Part 2 of this Schedule in respect of—

(a) a mobile radioactive apparatus described in an entry in column 1 of Table 4 where—

(i) that apparatus contains a quantity of radionuclides that does not exceed the value specified in column 2 of Table 4 in respect of an apparatus of that description; and

(ii) A complies with the conditions in sub-paragraph (2);

or

(b) mobile radioactive apparatus stored in transit.

(2) The conditions in this sub-paragraph are that A must—

(a) ensure that in relation to the total amount of all such mobile radioactive apparatus that A holds, the quantity of radionuclides does not exceed the value specified, in respect of an apparatus of that description, in column 3 of Table 4; and

(b) comply with the relevant standard conditions.

SECTION 4

Relevant standard conditions

Interpretation of this section

9. In this section, "radioactive substances" means radioactive material, mobile radioactive apparatus and radioactive waste, and "exempt radioactive substances" means radioactive substances in respect of which an exemption in section 2 or 3 of this Part applies.

Relevant standard conditions

10.—(1) Reference to the relevant standard conditions in sections 1 to 3 of this Part, means in respect of the exemption provided for in—

(a) paragraph 3(1)(a), the conditions in paragraphs 11 and 12;

(b) paragraph 4(6), 4(7) or 7(3), the conditions in paragraphs 11, 12 and 14;

(c) paragraph 8(1)(a), the conditions in paragraphs 11 (except paragraph 11(e)(ii) and 11(f)) and 13.

(2) A condition in paragraph 11, 12 or 13 does not apply in respect of an exemption in section 2 or 3 of this Part unless that condition is a relevant condition in respect of that exemption.

General conditions

11. A person ("A") to whom the conditions in this paragraph apply must—

(a) keep an adequate record of any exempt radioactive substances which A holds, and—

(i) in respect of exempt radioactive substances which are mobile radioactive apparatus, the locations at which they are kept or used;

(ii) in respect of other exempt radioactive substances, the location within the premises where A holds them;

(b) ensure that where reasonably practicable exempt radioactive substances or the containers of such radioactive substances, are marked or labelled as radioactive;

(c) in respect of exempt radioactive substances which are sealed sources, electrodeposited sources or tritium foil sources, not modify or mutilate those sources or cause a loss of containment such that radioactive material or radioactive waste may be released outside the source;

(d) allow the regulator access to such records or such premises as the regulator may request in order to determine that all of the conditions in respect of the relevant exemption are complied with;

(e) hold the exempt radioactive substances safely and securely to prevent, so far as reasonably practicable—

(i) accidental removal, loss or theft from the premises where they are held; or

(ii) loss of containment;

and

(f) in respect of exempt radioactive substances in a container—

(i) not modify or mutilate that container; and

(ii) prevent any uncontrolled or unintended release of radioactive material or radioactive waste from the container.

Loss or theft conditions

12.—(1) Subject to sub-paragraph (2), in the event of an incident of loss or theft (or suspected loss or theft) of exempt radioactive substances (except mobile radioactive apparatus) from the premises where they are held, a person to whom the condition in this paragraph applies must—

(a) notify the incident to the regulator as soon as reasonably practicable; and

(b) include in that notification the details of any other incidents of loss or theft (or suspected loss or theft) of any radioactive substances from those premises over the 12 months preceding the incident being notified.

(2) In respect of an incident described in sub-paragraph (1), a notification to the regulator is not required where in respect of the aggregated total amount of exempt radioactive substances (excluding mobile radioactive apparatus) lost or stolen (or suspected to have been lost or stolen) from the premises in the incident and in all other such incidents in the 12 months preceding it, the total quantity of radioactivity does not exceed the value that is ten times the value in column 2 of Table 5.

Loss or theft conditions: mobile radioactive apparatus

13.—(1) Subject to sub-paragraph (2), in the event of an incident of loss or theft (or suspected loss or theft) of mobile radioactive apparatus from a person ("A") to whom the condition in this paragraph applies, A must—

(a) notify the incident to the regulator as soon as reasonably practicable; and

(b) include in that notification the details of any other incidents of loss or theft (or suspected loss or theft) of any mobile radioactive apparatus from A over the 12 months preceding the incident being notified.

(2) In respect of an incident described in sub-paragraph (1), a notification to the regulator is not required where in respect of the aggregated total amount of mobile radioactive apparatus lost or stolen (or suspected to have been lost or stolen) from A in the incident and in all other such incidents in the 12 months preceding it, the total quantity of radioactivity does not exceed the value that is ten times the value in column 2 of Table 5.

Condition to dispose of accumulated waste

14. A person to whom the condition in this paragraph applies must dispose of the radioactive waste which is the subject of the exemption to which this condition applies—

(a) as soon as reasonably practicable after it has become waste; and

(b) in the case of such waste where it is a sealed source, a tritium foil source or an electrodeposited source, in any event within 26 weeks after it has become waste unless the regulator advises in writing that a longer period of accumulation is allowed.

SECTION 5

Exemption for disposing of solid radioactive waste

Exemption for receiving and disposing of solid radioactive waste

15.—(1) This paragraph applies to the following radioactive substances activities—

(a) the activity described in paragraph 11(2)(b) of Part 2 of this Schedule ("Activity A");

(b) the activity described in paragraph 11(4) of Part 2 of this Schedule ("Activity B").

(2) A person ("A") is exempt from the requirement for an environmental permit to carry on Activity A or Activity B in respect of solid radioactive waste described in paragraph 16(1)(a) where—

(a) A receives the waste on premises for the purpose of it being managed by A on those premises;

(b) in respect of those premises A manages substantial quantities of waste which is not radioactive waste; and

(c) the radioactive waste will be disposed of by A as soon as is reasonably practicable with the radioactive waste dispersed in non-radioactive waste.

(3) A person ("B") is exempt from the requirement for an environmental permit to carry on Activity A in respect of solid radioactive waste described in paragraph 16(1) where—

(a) in respect of a sealed source, an electrodeposited source or a tritium foil source, B complies with the conditions in paragraph 17(2); and

(b) in respect of any other waste described in paragraph 16(1)(a), B complies with the conditions in paragraph 17(1) and (2).

Solid radioactive waste

16.—(1) Solid radioactive waste referred to in paragraph 15 means—

(a) subject to sub-paragraph (2), solid radioactive waste described in an entry in column 1 of Table 6 which does not contain a concentration of radionuclides that exceeds the value specified in column 2 of that table in respect of that kind of waste; or

(b) a sealed source, an electrodeposited source or a tritium foil source which is not described in paragraph (a).

(2) Sub-paragraph (1)(a) does not apply to waste—

(a) where, prior to the disposal of that waste, a person has diluted it with the intention of ensuring that sub-paragraph (1)(a) is met; or

(b) which is NORM waste with a NORM waste concentration which is less than or equal to 10 Bq/g.

Conditions in respect of solid radioactive waste

17.—(1) The condition referred to in paragraph 15(3)(b) is that B must ensure that, in respect of the total amount of a waste to which this condition applies that is disposed of on or from the premises, the quantity of radioactivity which that waste contains must not exceed the value specified in column 3 of Table 6 in respect of that waste during the period stated in that column.

(2) The conditions referred to in paragraph 15(3)(a) and (b) are that B must—

(a) keep an adequate record of the solid radioactive waste which B disposes of on or from any premises under that paragraph;

(b) dispose of the waste by any of the routes described in sub-paragraph (3);

(c) where the disposal route in sub-paragraph (3)(a) is used, ensure that where reasonably practicable any marking or labelling of the waste or its container is removed before the person disposes of that waste;

(d) where the waste is or was a high-activity source, notify the details of the disposal to the regulator within 14 days of the disposal (including the information required by Annex II of the HASS Directive), in such form as may be required by the regulator; and

(e) allow the regulator access to such records or such premises as the regulator may request in order to determine that all of the conditions that apply in respect of the relevant exemption in paragraph 15(3) are complied with.

(3) The routes referred to in sub-paragraph (2)(b) are that the waste is transferred to—

(a) subject to sub-paragraph (4), a person who manages substantial quantities of non-radioactive waste and where the radioactive waste will be so managed with the radioactive waste dispersed in non-radioactive waste;

(b) a waste permitted person; or

(c) where the waste is a sealed source, an electrodeposited source or a tritium foil source, to a licensee of a nuclear site or to a person who is situated in another country and who is lawfully entitled to receive such waste.

(4) The route in sub-paragraph (3)(a) does not apply in respect of waste—

(a) described in paragraph 16(1)(b); or

(b) which is described in paragraph 16(1)(a) and which is a sealed source, an electrodeposited source or a tritium foil source, where in respect of the total amount of such a source which is disposed of on or from the premises under paragraph 15(3), the quantity of radioactivity which that waste contains exceeds the value specified in column 3 of Table 6 in respect of that source during the period stated in that column.

SECTION 6

Exemption for disposing of NORM waste

Exemption for receiving and disposing of NORM waste

18.—(1) This paragraph applies—

(a) to the following radioactive substances activities—

(i) the activity described in paragraph 11(2)(b) of Part 2 of this Schedule ("Activity A");

(ii) the activity described in paragraph 11(4) of Part 2 of this Schedule ("Activity B"); and

(b) where Activity A or B is carried on in respect of NORM waste—

(i) with a NORM waste concentration that does not exceed 5 Bq/g ("type 1 NORM Waste"); or

(ii) with a NORM waste concentration that exceeds 5 Bq/g but does not exceed 10 Bq/g ("type 2 NORM waste").

(2) Subject to sub-paragraph (6), a person ("A") is exempt from the requirement for an environmental permit to carry on Activity A or Activity B in respect of type 1 NORM waste or type 2 NORM waste where another person ("B") transfers that waste to A—

(a) in accordance with—

(i) a disposal permit held by B; or

(ii) an exemption from holding such a permit that applied to B in respect of the transfer to A;

and

(b) for the purpose of its disposal by A on the premises on which A receives it.

(3) Where a person ("C") disposes of—

(a) type 1 NORM waste on or from premises, sub-paragraph (4) applies to C; or

(b) type 2 NORM waste on or from premises, sub-paragraph (5) applies to C.

(4) C is exempt from the requirement for an environmental permit to carry on Activity A in respect of type 1 NORM waste where in relation to the total amount of such waste disposed of on or from the premises by C per year—

(a) the quantity of radionuclides does not exceed 5×10^{10} Bq, and C complies with the conditions in paragraph 19(1); or

(b) subject to sub-paragraph (6), the quantity of radionuclides exceeds 5×10^{10} Bq, and C complies with—

(i) the conditions in paragraph 19(1); and

(ii) where C intends to dispose of the waste by one of the methods in paragraph 19(2)(a), the conditions in paragraph 19(3).

(5) Subject to sub-paragraph (6), C is exempt from the requirement for an environmental permit to carry on Activity A in respect of type 2 NORM waste where C complies with the conditions in paragraph 19(1) and (3).

(6) Sub-paragraph (7) applies to a person ("E") where E holds an environmental permit to carry on Activity A for the disposal on or from premises ("the relevant premises") of NORM waste with a NORM waste concentration which exceeds 10 Bq/g.

(7) The following exemptions do not apply to E—

(a) the exemptions in sub-paragraph (2) in respect of type 2 NORM waste;

(b) the exemption in sub-paragraph (4)(b); and

(c) the exemption in sub-paragraph (5).

Conditions in respect of NORM waste

19.—(1) The conditions referred to in the exemptions in paragraph 18(4)(a) and (b)(i) and (5) are that C must—

(a) keep an adequate record of the NORM waste which C disposes of under those exemptions;

(b) dispose of the waste by any of the methods described in sub-paragraph (2);

(c) where the disposal method in sub-paragraph (2)(a) or (b) is used, ensure that where reasonably practicable any marking or labelling of the waste or its container is removed before C disposes of that waste; and

(d) allow the regulator access to such records or such premises as the regulator may request in order to determine that all of the conditions that apply to C in respect of the relevant exemption in that paragraph are complied with.

(2) The methods referred to in sub-paragraph (1)(b) are that the waste is disposed of—

(a) subject to sub-paragraph (3) where it applies, by burial in landfill or by the transfer of the waste to a person for the purpose of—

(i) the burial in landfill of the waste; or

(ii) the application of a treatment process to the waste which is preparatory to the burial in landfill of that waste;

(b) by incineration (or transfer to a person for such incineration or treatment which is preparatory to the incineration of the waste), but not in respect of—

(i) type 1 NORM waste, where in respect of the total amount of that waste that is incinerated (or transferred to a person for preparation or incineration) per year the quantity of radionuclides in the total amount of that waste exceeds 1×10^{8} Bq; or

(ii) type 2 NORM waste;

or

(c) by transfer to a waste permitted person.

(3) The conditions referred to in paragraph 18(4)(b)(ii) and (5) are that C must—

(a) make a written radiological assessment of the reasonably foreseeable pathways for the exposure of the public and workers to radiation in respect of—

(i) the application of any treatment process to the waste which is preparatory to its burial in landfill, at the place of that treatment; and

(ii) the burial in landfill of that waste, at the place of disposal;

(b) be satisfied that the assessment demonstrates that radiation doses are not expected to exceed—

(i) 1 millisievert per year to any worker at the place of treatment or disposal; and

(ii) 300 microsievert per year to any member of the public;

(c) provide that assessment to the regulator at least 28 days before the first disposal is made; and

(d) not dispose of that waste (or continue to do so) if the regulator objects in writing to that assessment.

SECTION 7

Exemption for disposing of aqueous radioactive waste

Exemption for disposing of aqueous radioactive waste in Table 6

20.—(1) Subject to sub-paragraph (2), a person ("A") is exempt from the requirement for an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) of Part 2 of this Schedule in respect of aqueous radioactive waste described in an entry in column 1 of Table 6, where A complies with the conditions in sub-paragraph (3).

(2) A is not exempt under sub-paragraph (1) where the person who generated that waste did not minimise the quantity of radionuclides generated as waste to the extent reasonably practicable.

(3) The conditions referred to in sub-paragraph (1) are that, in respect of the waste described in that sub-paragraph, A must—

(a) ensure that in respect of the total amount of that waste that is disposed of on or from the premises in a year, the quantity of radioactivity which that waste contains does not exceed the value specified in column 3 of Table 6 in respect of that waste;

(b) dispose of that waste to a relevant sewer or to a waste permitted person;

(c) keep an adequate record of that waste which A disposes of on or from the premises; and

(d) allow the regulator access to such records or such premises as the regulator may request in order to determine that the preceding conditions in this sub-paragraph are complied with.

Exemption for disposing of other aqueous radioactive waste

21.—(1) Subject to sub-paragraph (2), a person ("A") is exempt from the requirement for an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) of Part 2 of this Schedule in respect of aqueous radioactive waste described in sub-paragraph (3) where A disposes of that waste in accordance with the conditions in paragraph 22(1).

(2) A is not exempt under sub-paragraph (1) in respect of premises, where A holds an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) of Part 2 of this Schedule for the disposal of aqueous radioactive waste on or from those premises.

(3) Subject to sub-paragraph (4), the waste referred to in sub-paragraph (1) is aqueous radioactive waste—

(a) which is not described in an entry in column 1 of Table 6; and

(b) with a total concentration of radioactivity which does not exceed 100 Bq/ml.

(4) Sub-paragraph (3) does not apply to aqueous radioactive waste—

(a) which a person has diluted with the intention that—

(i) the waste has a concentration of radioactivity which is below the value in sub-paragraph (3)(b); or

(ii) the condition in paragraph 22(3)(a) or (4)(b) is complied with in respect of that waste;

or

(b) where the person who generated that waste did not minimise the quantity of radionuclides generated as waste to the extent reasonably practicable.

Conditions in respect of aqueous radioactive waste in paragraph 21

22.—(1) The conditions referred to in paragraph 21(1) are that A must—

(a) subject to sub-paragraph (2), dispose of the waste to which that paragraph applies—

(i) directly into a relevant river or the sea;

(ii) to a relevant sewer; or

(iii) to a waste permitted person.

(b) keep an adequate record of the waste which A disposes of from the premises under that paragraph;

(c) in respect of the disposal of aqueous non-table 6 waste, comply with sub-paragraph (3) or (4) as appropriate; and

(d) allow the regulator access to such records or such premises as the regulator may request in order to determine that all of the preceding conditions are complied with.

(2) In respect of aqueous non-Table 6 waste disposed of from the premises, A must not use both of the disposal routes described in sub-paragraph (1)(a)(i) and (ii) in a year and where—

(a) A uses the route in sub-paragraph (1)(a)(i), the conditions in sub-paragraph (3) apply to A; or

(b) A uses the route in sub-paragraph (1)(a)(ii), or A does not use the route in either sub-paragraph (1)(a)(i) or (ii), the conditions in sub-paragraph (4) apply to A.

(3) Where this sub-paragraph applies and A disposes of the aqueous non-table 6 waste directly into a relevant river or the sea, A must—

(a) in respect of any aqueous non-Table 6 waste which A disposes of, ensure that the concentration of radioactivity does not exceed the value specified in column 2 of Table 7; and

(b) in respect of the total amount of aqueous non-Table 6 waste which A disposes of from the premises in a year, ensure that the quantity of radioactivity does not exceed the value specified in column 4 of Table 7.

(4) Where this sub-paragraph applies and A disposes of the aqueous non-table 6 waste to a relevant sewer (or only to a waste permitted person), A must ensure that, in respect of the total amount of aqueous non-Table 6 waste which is disposed of from those premises in a year, the total quantity of radioactivity does not exceed—

(a) where any of that waste has a concentration of radioactivity which exceeds the value specified in column 2 of Table 7, the value in sub-paragraph (5); or

(b) where none of that waste has a concentration of radioactivity which exceeds the value specified in column 2 of Table 7, the value in sub-paragraph (5) or (6).

(5) The value referred to in sub-paragraph (4)(a) and (b) is—

(a) 1×10^8 Bq for the sum of the following radionuclides: H-3, C-11, C-14, F-18, P-32, P-33, S-35, Ca-45, Cr-51, Fe-55, Ga-67, Sr-89, Y-90, Tc-99m, In-111, I-123, I-125, I-131, Sm-153, Tl-201; and

(b) 1×10^6 Bq for the sum of all other radionuclides.

(6) The value referred to in sub-paragraph (4)(b) is the value specified in column 3 of Table 7.

(7) In this paragraph, "aqueous non-Table 6 waste" means aqueous radioactive waste which is not described in an entry in column 1 of Table 6.

SECTION 8

Exemption for disposal of gaseous radioactive waste

Exemption for disposal of gaseous radioactive waste

23.—(1) Subject to sub-paragraph (2), a person ("A") is exempt from the requirement for an environmental permit to carry on the radioactive substances activity described in paragraph 11(2)(b) of Part 2 of this Schedule in respect of gaseous radioactive waste where—

(a) the only radionuclide contained in that waste is Kr-85 and A—

(i) ensures that in respect of the total amount of such waste which is disposed of from the premises in a year, the total quantity of radioactivity does not exceed 10^{11} Bq; and

(ii) complies with the conditions in paragraph 24(1);

or

(b) subject to sub-paragraph (3), that waste—

(i) is released from within a container at the time that the container is opened; and

(ii) is emitted by solid or liquid radioactive material within the container,

and A complies with the conditions in paragraph 24(1).

(2) Sub-paragraph (1) does not apply to waste where the person who generated that waste did not minimise the quantity of radionuclides generated as waste to the extent reasonably practicable.

(3) Sub-paragraph (1)(b) does not apply in respect of any gas which arises as a result of a process applied by a person to the contained radioactive material.

Conditions in respect of gaseous radioactive waste

24.—(1) The conditions referred to in paragraph 23(1) are that A must—

(a) to the extent that is reasonably practicable—

(i) in respect of relevant gaseous waste which arises in a building, cause the waste to be disposed of by an extraction system which removes the waste from the area where it arose and which vents the waste into the atmosphere; and

(ii) prevent the entry or, where sub-paragraph (i) applies, the re-entry, of relevant gaseous waste into a building;

and

(b) allow the regulator access to such records or such premises as the regulator may request in order to determine that all of the conditions that apply to A in respect of the relevant exemption in that paragraph are complied with.

(2) In this paragraph "relevant gaseous waste" means waste which is described in paragraph 23(1) and disposed of under the exemption in that paragraph.

SECTION 9

Tables and summation rules in this Part

Table 4

25. The Table 4 referred to in sections 2 and 3 of this Part—

Table 4

Radioactive material and accumulated radioactive waste: values of maximum quantities

Substance or article	*Maximum quantity of radionuclides for each substance or article*	*Maximum quantity of radionuclides:* *(a) on any premises in items which satisfy the limit in column 2; or* *(b) in mobile radioactive apparatus held by a person*
A sealed source of a type not described in any other row of this table.	4×10^6 Bq	2×10^8 Bq
A Class A gaseous tritium light device.	2×10^{10} Bq	5×10^{12} Bq
A Class B gaseous tritium light device.	1×10^{12} Bq	3×10^{13} Bq
A Class C gaseous tritium light device.	1×10^{12} Bq	No limit.
Any sealed source which is solely radioactive material or radioactive waste because it contains tritium.	2×10^{10} Bq	5×10^{12} Bq
A tritium foil source.	2×10^{10} Bq	5×10^{12} Bq
A smoke detector affixed to premises.	4×10^6 Bq	No limit.
An electrodeposited source.	6×10^8 Bq Ni-63 or 2×10^8 Bq Fe-55	6×10^{11} Bq
A luminised article.	8×10^7 Bq Pm-147 or 4×10^9 Bq H-3	4×10^{10} Bq Pm-147 or 2×10^{11} Bq H-3
A Ba-137m eluting source.	4×10^4 Bq Cs-137+	4×10^5 Bq Cs-137+
A substance or article which is or contains magnesium alloy or thoriated tungsten in which the thorium concentration does not exceed 4% by mass.	No limit.	No limit.
A uranium or thorium compound.	Up to a total of 5 kg of uranium and thorium.	Up to a total of 5 kg of uranium and thorium.

Substance or article	*Maximum quantity of radionuclides for each substance or article*	*Maximum quantity of radionuclides:* *(a) on any premises in items which satisfy the limit in column 2; or* *(b) in mobile radioactive apparatus held by a person*
A substance or article (other than a sealed source) which is intended for use for medical or veterinary diagnosis or treatment or clinical or veterinary trials.	1×10^9 Bq Tc-99m and in respect of the total for all other radionuclides— (i) 1×10^8 Bq if the substance or article is radioactive material; or (ii) 2×10^8 Bq if the substance or article is radioactive waste.	1×10^9 Bq Tc-99m and 2×10^8 Bq of all other radionuclides, (no more than 1×10^8 Bq of which is contained in radioactive material).

Table 5

26. The Table 5 referred to in sections 2 and 4 of this Part is—

Table 5

Radionuclides: values of quantities and concentrations

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
H-3	10^9	10^6
Be-7	10^7	10^3
C-14	10^7	10^4
O-15	10^9	10^2
F-18	10^6	10
Na-22	10^6	10
Na-24	10^5	10
Si-31	10^6	10^3
P-32	10^5	10^3
P-33	10^8	10^5
S-35	10^8	10^5
Cl-36	10^6	10^4
Cl-38	10^5	10
Ar-37	10^8	10^6
Ar-41	10^9	10^2
K-42	10^6	10^2
K-43	10^6	10
Ca-45	10^7	10^4
Ca-47	10^6	10
Sc-46	10^6	10
Sc-47	10^6	10^2
Sc-48	10^5	10
V-48	10^5	10
Cr-51	10^7	10^3

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Mn-51	10^5	10
Mn-52	10^5	10
Mn-52m	10^5	10
Mn-53	10^9	10^4
Mn-54	10^6	10
Mn-56	10^5	10
Fe-52	10^6	10
Fe-55	10^6	10^4
Fe-59	10^6	10
Co-55	10^6	10
Co-56	10^5	10
Co-57	10^6	10^2
Co-58	10^6	10
Co-58m	10^7	10^4
Co-60	10^5	10
Co-60m	10^6	10^3
Co-61	10^6	10^2
Co-62m	10^5	10
Ni-59	10^8	10^4
Ni-63	10^8	10^5
Ni-65	10^6	10
Cu-64	10^6	10^2
Zn-65	10^6	10
Zn-69	10^6	10^4
Zn-69m	10^6	10^2
Ga-72	10^5	10
Ge-71	10^8	10^4
As-73	10^7	10^3
As-74	10^6	10
As-76	10^5	10^2
As-77	10^6	10^3
Se-75	10^6	10^2
Br-82	10^6	10
Kr-74	10^9	10^2
Kr-76	10^9	10^2
Kr-77	10^9	10^2
Kr-79	10^5	10^3
Kr-81	10^7	10^4
Kr-83m	10^{12}	10^5
Kr-85	10^4	10^5
Kr-85m	10^{10}	10^3
Kr-87	10^9	10^2
Kr-88	10^9	10^2
Rb-86	10^5	10^2
Sr-85	10^6	10^2
Sr-85m	10^7	10^2
Sr-87m	10^6	10^2
Sr-89	10^6	10^3

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Sr-90+([17])	10^4	10^2
Sr-91	10^5	10
Sr-92	10^6	10
Y-90	10^5	10^3
Y-91	10^6	10^3
Y-91m	10^6	10^2
Y-92	10^5	10^2
Y-93	10^5	10^2
Zr-93+	10^7	10^3
Zr-95	10^6	10
Zr-97+	10^5	10
Nb-93m	10^7	10^4
Nb-94	10^6	10
Nb-95	10^6	10
Nb-97	10^6	10
Nb-98	10^5	10
Mo-90	10^6	10
Mo-93	10^8	10^3
Mo-99	10^6	10^2
Mo-101	10^6	10
Tc-96	10^6	10
Tc-96m	10^7	10^3
Tc-97	10^8	10^3
Tc-97m	10^7	10^3
Tc-99	10^7	10^4
Tc-99m	10^7	10^2
Ru-97	10^7	10^2
Ru-103	10^6	10^2
Ru-105	10^6	10
Ru-106+	10^5	10^2
Rh-103m	10^8	10^4
Rh-105	10^7	10^2
Pd-103	10^8	10^3
Pd-109	10^6	10^3
Ag-105	10^6	10^2
Ag-108m+	10^6	10
Ag-110m	10^6	10
Ag-111	10^6	10^3
Cd-109	10^6	10^4
Cd-115	10^6	10^2
Cd-115m	10^6	10^3
In-111	10^6	10^2
In-113m	10^6	10^2
In-114m	10^6	10^2
In-115m	10^6	10^2
Sn-113	10^7	10^3
Sn-125	10^5	10^2

([17]) For the meaning of "+" and "sec" in this Part see paragraph 34.

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Sb-122	10^4	10^2
Sb-124	10^6	10
Sb-125	10^6	10^2
Te-123m	10^7	10^2
Te-125m	10^7	10^3
Te-127	10^6	10^3
Te-127m	10^7	10^3
Te-129	10^6	10^2
Te-129m	10^6	10^3
Te-131	10^5	10^2
Te-131m	10^6	10
Te-132	10^7	10^2
Te-133	10^5	10
Te-133m	10^5	10
Te-134	10^6	10
I-123	10^7	10^2
I-125	10^6	10^3
I-126	10^6	10^2
I-129	10^5	10^2
I-130	10^6	10
I-131	10^6	10^2
I-132	10^5	10
I-133	10^6	10
I-134	10^5	10
I-135	10^6	10
Xe-131m	10^4	10^4
Xe-133	10^4	10^3
Xe-135	10^{10}	10^3
Cs-129	10^5	10^2
Cs-131	10^6	10^3
Cs-132	10^5	10
Cs-134m	10^5	10^3
Cs-134	10^4	10
Cs-135	10^7	10^4
Cs-136	10^5	10
Cs-137+	10^4	10
Cs-138	10^4	10
Ba-131	10^6	10^2
Ba-140+	10^5	10
La-140	10^5	10
Ce-139	10^6	10^2
Ce-141	10^7	10^2
Ce-143	10^6	10^2
Ce-144+	10^5	10^2
Pr-142	10^5	10^2
Pr-143	10^6	10^4
Nd-147	10^6	10^2
Nd-149	10^6	10^2
Pm-147	10^7	10^4

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Pm-149	10^6	10^3
Sm-151	10^8	10^4
Sm-153	10^6	10^2
Eu-152	10^6	10
Eu-152m	10^6	10^2
Eu-154	10^6	10
Eu-155	10^7	10^2
Gd-153	10^7	10^2
Gd-159	10^6	10^3
Tb-160	10^6	10
Dy-165	10^6	10^3
Dy-166	10^6	10^3
Ho-166	10^5	10^3
Er-169	10^7	10^4
Er-171	10^6	10^2
Tm-170	10^6	10^3
Tm-171	10^8	10^4
Yb-175	10^7	10^3
Lu-177	10^7	10^3
Hf-181	10^6	10
Ta-182	10^4	10
W-181	10^7	10^3
W-185	10^7	10^4
W-187	10^6	10^2
Re-186	10^6	10^3
Re-188	10^5	10^2
Os-185	10^6	10
Os-191	10^7	10^2
Os-191m	10^7	10^3
Os-193	10^6	10^2
Ir-190	10^6	10
Ir-192	10^4	10
Ir-194	10^5	10^2
Pt-191	10^6	10^2
Pt-193m	10^7	10^3
Pt-197	10^6	10^3
Pt-197m	10^6	10^2
Au-198	10^6	10^2
Au-199	10^6	10^2
Hg-197	10^7	10^2
Hg-197m	10^6	10^2
Hg-203	10^5	10^2
Tl-200	10^6	10
Tl-201	10^6	10^2
Tl-202	10^6	10^2
Tl-204	10^4	10^4
Pb-203	10^6	10^2
Pb-210+	10^4	10
Pb-212+	10^5	10

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Bi-206	10^5	10
Bi-207	10^6	10
Bi-210	10^6	10^3
Bi-212+	10^5	10
Po-203	10^6	10
Po-205	10^6	10
Po-207	10^6	10
Po-210	10^4	10
At-211	10^7	10^3
Rn-220+	10^7	10^4
Rn-222+	10^8	10
Ra-223+	10^5	10^2
Ra-224+	10^5	10
Ra-225	10^5	10^2
Ra-226+	10^4	10
Ra-227	10^6	10^2
Ra-228+	10^5	10
Ac-228	10^6	10
Th-226+	10^7	10^3
Th-227	10^4	10
Th-228+	10^4	1
Th-229+	10^3	1
Th-230	10^4	1
Th-231	10^7	10^3
Th-232 sec	10^3	1
Th-234+	10^5	10^3
Pa-230	10^6	10
Pa-231	10^3	1
Pa-233	10^7	10^2
U-230+	10^5	10
U-231	10^7	10^2
U-232+	10^3	1
U-233	10^4	10
U-234	10^4	10
U-235+	10^4	10
U-236	10^4	10
U-237	10^6	10^2
U-238+	10^4	10
U-238 sec	10^3	1
U-239	10^6	10^2
U-240	10^7	10^3
U-240+	10^6	10
Np-237+	10^3	1
Np-239	10^7	10^2
Np-240	10^6	10
Pu-234	10^7	10^2
Pu-235	10^7	10^2
Pu-236	10^4	10
Pu-237	10^7	10^3

Radionuclides	*Maximum quantity of radioactivity (Bq) on any premises*	*Maximum concentration (Bq/g)*
Pu-238	10^4	1
Pu-239	10^4	1
Pu-240	10^3	1
Pu-241	10^5	10^2
Pu-242	10^4	1
Pu-243	10^7	10^3
Pu-244	10^4	1
Am-241	10^4	1
Am-242	10^6	10^3
Am-242m+	10^4	1
Am-243+	10^3	1
Cm-242	10^5	10^2
Cm-243	10^4	1
Cm-244	10^4	10
Cm-245	10^3	1
Cm-246	10^3	1
Cm-247	10^4	1
Cm-248	10^3	1
Bk-249	10^6	10^3
Cf-246	10^6	10^3
Cf-248	10^4	10
Cf-249	10^3	1
Cf-250	10^4	10
Cf-251	10^3	1
Cf-252	10^4	10
Cf-253	10^5	10^2
Cf-254	10^3	1
Es-253	10^5	10^2
Es-254	10^4	10
Es-254m	10^6	10^2
Fm-254	10^7	10^4
Fm-255	10^6	10^3
Any other radionuclide that is: (a) not of natural terrestrial or cosmic origin; or (b) listed in Table 2 in this Schedule.	10^3, or the quantity given in respect of that radionuclide in the Health Protection Agency's publication *'Exempt Concentrations and Quantities for Radionuclides not Included in the European Basic Safety Standards Directive'*([18]).	1, or the concentration given in respect of that radionuclide in the publication referenced in column 2.

27. The summation rule in respect of column 2 of Table 5 is the sum of the quotients A/B where—

([18]) NRPB- R306 - Exempt Concentrations and Quantities for Radionuclides not Included in the European Basic Safety Standards Directive (April 1999), ISBN 0-85951-429-3.

(a) "A" means the quantity of each radionuclide listed in column 1 of Table 5 that is present in the material and waste; and

(b) "B" means the quantity of that radionuclide specified in column 2 of Table 5.

28. The summation rule in respect of column 3 of Table 5 is the sum of the quotients C/D where—

(a) "C" means the concentration of each radionuclide listed in column 1 of Table 5 that is present in the material and waste; and

(b) "D" means the concentration of that radionuclide specified in column 3 of Table 5.

Table 6

29. The Table 6 referred to in sections 5 and 7 of this Part is—

Table 6

Radioactive waste: values of quantities and concentrations

Radioactive waste	*Maximum concentration of radionuclides*	*Maximum quantity of radioactivity to be disposed of in the period stated*
Solid radioactive waste, with no single item > 4×10^4 Bq.	4×10^5 Bq for the sum of all radionuclides per $0.1m^3$.	2×10^8 Bq/year.
Solid radioactive waste containing tritium and C-14 only, with no single item > 4×10^5 Bq.	4×10^6 Bq of tritium and C-14 per $0.1m^3$.	2×10^9 Bq/year.
Individual sealed sources.	2×10^5 Bq for the sum of all radionuclides per $0.1m^3$.	1×10^7 Bq/year.
Individual sealed sources which are solely radioactive waste because they contain tritium.	2×10^{10} Bq of tritium per $0.1m^3$.	1×10^{13} Bq/year.
Luminised articles with no single item containing > 8×10^7 Bq of Pm-147 or > 4×10^9 of tritium.	8×10^7 Bq per $0.1m^3$ of Pm-147 or 4×10^9 Bq per $0.1m^3$ for tritium.	2×10^9 Bq/year of Pm-147 or 1×10^{11} Bq/year of tritium.
Solid radioactive waste which consists of magnesium alloy, thoriated tungsten or dross from hardener alloy in which the thorium concentration does not exceed 4% by mass.	No limit.	No limit.
Solid uranium or thorium compound.	No limit.	0.5 kg of uranium or thorium per week.
Aqueous liquid uranium or thorium compound.	No limit.	0.5 kg of uranium or thorium per year.

Radioactive waste	*Maximum concentration of radionuclides*	*Maximum quantity of radioactivity to be disposed of in the period stated*
Aqueous liquid human excreta.	No limit.	1×10^{10} Bq/year of Tc-99m and 5×10^{9} Bq/year for the sum of all other radionuclides.

Table 7

30. The Table 7 referred to in section 7 of this Part is—

Table 7

Aqueous radioactive waste values

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
H-3	10^3	10^{10}	10^{10}
Be-7	1	10^7	10^7
C-14	0.1	10^6	10^6
F-18	0.1	10^6	10^6
Na-22	1	10^6	10^7
Na-24	1	10^7	10^7
Si-31	10	10^8	10^8
P-32	0.001	10^4	10^4
P-33	0.001	10^4	10^4
S-35	10	3×10^7	10^8
Cl-36	10	10^7	10^8
Cl-38	0.1	10^6	10^6
K-42	0.01	10^5	10^5
K-43	0.01	10^5	10^5
Ca-45	1	10^7	10^7
Ca-47	0.1	10^6	10^6
Sc-46	0.001	10^4	10^4
Sc-47	0.01	10^5	10^5
Sc-48	0.001	10^4	10^4
V-48	1	10^7	10^7
Cr-51	10	10^8	10^8
Mn-51	0.001	10^4	10^4
Mn-52	0.001	10^4	10^4
Mn-52m	0.001	10^4	10^4
Mn-53	1	10^7	10^7
Mn-54	0.01	10^5	10^5
Mn-56	0.001	10^4	10^4
Fe-52	0.01	10^5	10^5
Fe-55	1	10^7	10^7

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
Fe-59	0.01	10^5	10^5
Co-55	0.001	10^4	10^4
Co-56	0.001	10^4	10^4
Co-57	0.1	10^6	10^6
Co-58	0.1	10^6	10^6
Co-58m	1	10^7	10^7
Co-60	0.01	10^5	10^5
Co-60m	1	10^7	10^7
Co-61	0.1	10^6	10^6
Co-62m	0.001	10^4	10^4
Ni-59	1	10^7	10^7
Ni-63	10^2	10^9	10^9
Ni-65	0.01	10^5	10^5
Cu-64	0.1	10^6	10^6
Zn-65	0.1	3×10^5	10^6
Zn-69	10	10^8	10^8
Zn-69m	0.1	10^6	10^6
Ga-67	0.1	10^6	10^6
Ga-72	0.001	10^4	10^4
Ge-71	1	10^7	10^7
As-73	10	10^8	10^8
As-74	1	10^7	10^7
As-76	1	10^7	10^7
As-77	1	10^7	10^7
Se-75	0.1	3×10^5	10^6
Br-82	0.1	10^6	10^6
Rb-86	0.1	10^6	10^6
Sr-85	0.1	10^6	10^6
Sr-85m	0.1	10^6	10^6
Sr-87m	0.1	10^6	10^6
Sr-89	1	10^7	10^7
Sr-90+	0.1	3×10^5	10^6
Sr-91	0.01	10^5	10^5
Sr-92	0.01	10^5	10^5
Y-90	1	10^7	10^7
Y-91	1	10^7	10^7
Y-91m	0.01	10^5	10^5
Y-92	0.1	10^6	10^6
Y-93	0.1	10^6	10^6
Zr-93	10	10^8	10^8
Zr-95+	0.001	10^4	10^4
Zr-97	0.01	10^5	10^5
Nb-93m	10	10^8	10^8
Nb-94	0.1	10^6	10^6
Nb-95	1	10^7	10^7
Nb-97	1	10^7	10^7
Nb-98	0.1	10^6	10^6
Mo-90	0.1	10^6	10^6

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
Mo-93	1	10^7	10^7
Mo-99	0.1	10^6	10^6
Mo-101	0.01	10^5	10^5
Tc-96	1	10^7	10^7
Tc-96m	10^2	10^9	10^9
Tc-97	10^2	10^9	10^9
Tc-97m	10	10^8	10^8
Tc-99	10	10^7	10^8
Tc-99m	10	3×10^7	10^8
Ru-97	0.01	10^5	10^5
Ru-103	0.01	10^5	10^5
Ru-105	0.01	10^5	10^5
Ru-106+	0.1	10^6	10^6
Rh-103m	10	10^8	10^8
Rh-105	1	10^7	10^7
Pd-103	0.1	10^6	10^6
Pd-109	0.1	10^6	10^6
Ag-105	1	10^7	10^7
Ag-108m	0.1	10^6	10^6
Ag-110m	0.1	10^6	10^6
Ag-111	10	10^8	10^8
Cd-109	1	10^7	10^7
Cd-115	0.1	10^6	10^6
Cd-115m	1	10^7	10^7
In-111	0.01	10^5	10^5
In-113m	0.01	10^5	10^5
In-114m	0.01	10^5	10^5
In-115m	0.01	10^5	10^5
Sn-113	0.1	10^6	10^6
Sn-125	0.01	10^5	10^5
Sb-122	0.1	10^6	10^6
Sb-124	0.1	10^6	10^6
Sb-125	1	10^7	10^7
Te-123m	1	10^7	10^7
Te-125m	1	10^7	10^7
Te-127	10	10^8	10^8
Te-127m	1	10^7	10^7
Te-129	10	10^8	10^8
Te-129m	1	10^7	10^7
Te-131	1	10^7	10^7
Te-131m	1	10^7	10^7
Te-132	0.1	10^6	10^6
Te-133	1	10^7	10^7
Te-133m	1	10^7	10^7
Te-134	1	10^7	10^7
I-123	1	10^7	10^7
I-125	1	10^7	10^7

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
I-126	0.1	10^6	10^6
I-129	0.1	10^6	10^6
I-130	0.1	10^6	10^6
I-131	0.1	10^6	10^6
I-132	0.1	10^6	10^6
I-133	0.1	10^6	10^6
I-134	0.1	10^6	10^6
I-135	0.1	10^6	10^6
Cs-129	0.01	10^5	10^5
Cs-131	0.1	10^6	10^6
Cs-132	0.01	10^5	10^5
Cs-134	0.01	10^5	10^5
Cs-134m	0.1	10^6	10^6
Cs-135	0.1	10^6	10^6
Cs-136	0.001	10^4	10^4
Cs-137+	0.01	10^5	10^5
Cs-138	0.001	10^4	10^4
Ba-131	0.1	10^6	10^6
Ba-140	0.1	10^6	10^6
La-140	0.001	10^4	10^4
Ce-139	0.1	10^6	10^6
Ce-141	0.1	10^6	10^6
Ce-143	0.01	10^5	10^5
Ce-144	0.1	10^6	10^6
Pr-142	0.1	10^6	10^6
Pr-143	10	10^8	10^8
Nd-147	0.01	10^5	10^5
Nd-149	0.01	10^5	10^5
Pm-147	10	10^8	10^8
Pm-149	1	10^7	10^7
Sm-151	10^2	10^9	10^9
Sm-153	0.1	10^6	10^6
Eu-152	0.01	10^5	10^5
Eu-152m	0.01	10^5	10^5
Eu-154	0.01	10^5	10^5
Eu-155	0.1	10^6	10^6
Gd-153	0.1	10^6	10^6
Gd-159	0.1	10^6	10^6
Tb-160	0.01	10^5	10^5
Dy-165	0.1	10^6	10^6
Dy-166	0.1	10^6	10^6
Ho-166	0.1	10^6	10^6
Er-169	10	10^8	10^8
Er-171	0.01	10^5	10^5
Tm-170	1	10^7	10^7
Tm-171	10	10^8	10^8
Yb-175	0.1	10^6	10^6
Lu-177	0.1	10^6	10^6

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
Hf-181	0.01	10^5	10^5
Ta-182	0.001	10^4	10^4
W-181	0.1	10^6	10^6
W-185	1	10^7	10^7
W-187	0.01	10^5	10^5
Re-186	1	10^7	10^7
Re-188	1	10^7	10^7
Os-185	0.01	10^5	10^5
Os-191	0.1	10^6	10^6
Os-191m	1	10^7	10^7
Os-193	0.1	10^6	10^6
Ir-190	0.001	10^4	10^4
Ir-192	0.01	10^5	10^5
Ir-194	0.1	10^6	10^6
Pt-191	0.01	10^5	10^5
Pt-193m	1	10^7	10^7
Pt-197	0.1	10^6	10^6
Pt-197m	0.1	10^6	10^6
Au-198	1	10^7	10^7
Au-199	1	10^7	10^7
Hg-197	1	10^7	10^7
Hg-197m	0.1	10^6	10^6
Hg-203	0.1	10^6	10^6
Tl-200	0.01	10^5	10^5
Tl-201	0.1	10^6	10^6
Tl-202	0.01	10^5	10^5
Tl-204	0.1	10^6	10^6
Pb-203	0.01	10^5	10^5
Pb-210	0.001	10^4	10^4
Pb-212	0.1	10^6	10^6
Bi-206	0.01	10^5	10^5
Bi-207	0.1	10^6	10^6
Bi-210	10	10^8	10^8
Bi-212	1	10^7	10^7
Po-203	0.001	10^4	10^4
Po-205	0.001	10^4	10^4
Po-207	0.001	10^4	10^4
Po-210	0.001	10^4	10^4
At-211	1	10^7	10^7
Ra-223	0.01	10^5	10^5
Ra-224+	0.01	10^5	10^5
Ra-225	0.01	10^5	10^5
Ra-226+	0.01	10^5	10^5
Ra-227	1	10^7	10^7
Ra-228	0.01	10^5	10^5
Ac-227	0.1	10^6	10^6
Ac-228	0.001	10^4	10^4

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
Th-226	0.1	10^6	10^6
Th-227	0.01	10^5	10^5
Th-228	1	10^7	10^7
Th-229	0.01	10^5	10^5
Th-230	1	10^7	10^7
Th-231	0.1	10^6	10^6
Th-232	1	10^6	10^7
Th-234	0.1	10^6	10^6
Pa-230	0.01	10^5	10^5
Pa-231	0.01	10^5	10^5
Pa-233	0.1	10^6	10^6
U-230	0.1	10^6	10^6
U-231	10	10^8	10^8
U-232	0.1	10^6	10^6
U-233	0.1	10^6	10^6
U-234	0.1	10^6	10^6
U-235+	0.1	10^6	10^6
U-236	0.1	10^6	10^6
U-237	10	10^8	10^8
U-238+	0.1	10^6	10^6
U-239	10	10^8	10^8
U-240	10	10^8	10^8
Np-237	0.1	10^6	10^6
Np-239	1	10^7	10^7
Np-240	0.1	10^6	10^6
Pu-234	0.01	10^5	10^5
Pu-235	0.01	10^5	10^5
Pu-236	1	10^7	10^7
Pu-237	0.1	10^6	10^6
Pu-238	0.1	10^6	10^6
Pu-239	0.1	10^6	10^6
Pu-240	0.1	10^6	10^6
Pu-241	10	10^8	10^8
Pu-242	0.1	10^6	10^6
Pu-243	0.1	10^6	10^6
Pu-244	0.1	10^6	10^6
Am-241	0.1	10^6	10^6
Am-242	0.1	10^6	10^6
Am-242m	0.1	10^6	10^6
Am-243	0.1	10^6	10^6
Cm-242	1	10^7	10^7
Cm-243	0.1	10^6	10^6
Cm-244	0.1	10^6	10^6
Cm-245	0.01	10^5	10^5
Cm-246	0.1	10^6	10^6
Cm-247	0.01	10^5	10^5
Cm-248	0.1	10^6	10^6
Bk-249	10^2	10^9	10^9

Radionuclide	*Concentration in Bq/ litre*	*Maximum annual quantity of radionuclides to a relevant sewer (Bq/ year)*	*Maximum annual quantity of radionuclides directly into a relevant river or the sea (Bq/ year)*
Cf-246	1	10^7	10^7
Cf-248	1	10^7	10^7
Cf-249	0.01	10^5	10^5
Cf-250	0.1	10^6	10^6
Cf-251	0.01	10^5	10^5
Cf-252	0.1	10^6	10^6
Cf-253	10	10^8	10^8
Cf-254	0.0001	10^3	10^3
Es-253	1	10^7	10^7
Es-254	0.1	10^6	10^6
Es-254m	0.01	10^5	10^5
Fm-254	1	10^7	10^7
Fm-255	0.1	10^6	10^6
Any other radionuclide that is not of natural terrestrial or cosmic origin	0.0001 or that concentration which gives rise to a dose to a member of the public of 10 microsieverts per year calculated in accordance with the methodology used to calculate other concentrations in this table([19]).	10^3 or that quantity which corresponds to 3000m^3 of aqueous radioactive waste up to the appropriate concentration as calculated in accordance with column 2.	10^3 or that quantity which corresponds to 10000m^3 of aqueous radioactive waste up to the appropriate concentration as calculated in accordance with column 2.

31. The summation rule in respect of column 2 of Table 7 is the sum of the quotients A/B where—

(a) "A" means the concentration in Bq/ litre of each radionuclide listed in column 1 of Table 7 that is present in aqueous waste which is not described in a row in column 1 of Table 6; and

(b) "B" means the concentration of that radionuclide specified in column 2 of Table 7.

32. The summation rule in respect of column 3 of Table 7 is the sum of the quotients C/D where—

(a) "C" means the quantity in Bq of each radionuclide listed in column 1 of Table 7 that is present in the aqueous waste which is not described in a row in column 1 of Table 6 which is disposed of in the year; and

(b) "D" means the quantity of that radionuclide specified in column 3 of Table 7.

([19]) The concentrations in this table were calculated using methods adopted by the Health Protection Agency in their document HPA-CRCE-005 - Derivation of Liquid Exclusion or Exemption Levels to Support the RSA93 Exemption Order Review, published in August 2010 (ISBN 0-978-85951-673-0).

33. The summation rule in respect of column 4 of Table 7 is the sum of the quotients C/E where—

(a) "C" means the quantity in Bq of each radionuclide listed in column 1 of Table 7 that is present in the aqueous waste which is not described in a row in column 1 of Table 6 which is disposed of in the year; and

(b) "E" means the quantity of that radionuclide specified in column 4 of Table 7.

Interpretation of this section

34. In this section, where any radionuclide carries the suffix "+" or "sec"—

(a) that radionuclide represents the parent radionuclide in secular equilibrium with the corresponding daughter radionuclides which are identified in column 2 of Table 8 adjacent to that parent radionuclide; and

(b) a concentration or activity value given in respect of such a parent radionuclide is the value for the parent radionuclide alone, but already takes into account the daughter radionuclides in column 2 that are present.

Table 8

35. The Table 8 referred to in paragraph 34 is—

Table 8

Radionuclides in secular equilibrium

Parent radionuclide	*Daughter radionuclides*
Sr-90+	Y-90
Zr-93+	Nb-93m
Zr-95+	Nb-95
Zr-97+	Nb-97
Ru-106+	Rh-106
Ag-108m+	Ag-108
Cs-137+	Ba-137m
Ba-140+	La-140
Ce-144+	Pr-144
Pb-210+	Bi-210, Po-210
Pb-212+	Bi-212, Tl-208, Po-212
Bi-212+	Tl-208, Po-212
Rn-220+	Po-216
Rn-222+	Po-218, Pb-214, Bi-214, Po-214
Ra-223+	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224+	Where Ra-224+ is referred to in Table 5: Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212 Where Ra-224+ is referred to in Table 7: Pb-212
Ra-226+	Where Ra-226+ is referred to in Table 5: Rn-222, Po-218, Pb-214, Bi-214, Pb-210, Bi-210, Po-210, Po-214 Where Ra-226+ is referred to in Table 7: Rn-222, Po-218, Pb-214, Bi-214, Po-214
Ra-228+	Ac-228
Th-226+	Ra-222, Rn-218, Po-214
Th-228+	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Po-212, Tl-208
Th-229+	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-232 sec	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212,

Parent radionuclide	*Daughter radionuclides*
	Bi-212, Po-212, Tl-208
Th-234+	Pa-234m
U-230+	Th-226, Ra-222, Rn-218, Po-214
U-232+	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
U-235+	Th-231
U-238+	Th-234, Pa-234m, Pa-234
U-238 sec	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Pb-210, Bi-210, Po-210, Po-214
U-240+	Np-240
Np-237+	Pa-233
Am-242m+	Am-242
Am-243+	Np-239

PART 8

Radioactivity to be disregarded

SECTION 1

Provisions

Interpretation

1.—(1) For the purposes of the matters referred to in sub-paragraph (2), no account is to be taken of any radioactivity possessed by a substance or article or by a part of any premises.

(2) The matters are—

(a) the operation of a provision to which this Part applies;

(b) the exercise of a power conferred by, or for the enforcement of, a provision to which this Part applies; and

(c) the performance of a duty imposed by, or for the enforcement of, a provision to which this Part applies.

2.—(1) This Part applies to a provision—

(a) specified in paragraph 3;

(b) contained in an instrument made under a provision so specified;

(c) which has effect by virtue of a provision so specified; or

(d) which extends or applies a provision so specified.

(2) This Part also applies to a provision of a local enactment (whenever passed or made and however expressed) in so far as it—

(a) prohibits or restricts—

(i) the disposal or accumulation of waste;

(ii) the disposal or accumulation of a substance which is or causes a nuisance; or

(iii) a disposal or accumulation which causes pollution; or

(b) confers a power, or imposes a duty, on a public authority or an officer of a public authority to take action to prevent, restrict or abate a disposal or accumulation of a description given in paragraph (a).

(3) In sub-paragraph (2)—

(a) a reference to "disposal" in relation to a provision to which this Part applies, means—

(i) the discharge or deposit of a substance; or

(ii) the allowing of a substance to escape or to enter a stream or other place,

as may be mentioned in that provision; and

(b) "local enactment" means—

(i) a local or private Act;

(ii) an order confirmed by Parliament or brought into operation in accordance with special parliamentary procedure; or

(iii) an order confirmed by the National Assembly for Wales or brought into operation in accordance with special procedure in the Assembly.

Provisions of enactments

3.—(1) The provisions referred to in paragraph 2(1) are those listed in table 9 below.

(2) References to provisions of the Water Resources Act 1991([20]) have effect subject to the power conferred by section 98 of that Act.

Table 9

Statutory provisions in respect of which radioactivity is to be disregarded

Act	*Provisions*
Public Health Act 1936 (c. 49)	Sections 48, 79, 81, 82, 141, 259 and 261.
Water Act 1945 (c. 42)	Section 18 so far as it continues to have effect by virtue of Schedule 2 to the Water Consolidation (Consequential Provisions) Act 1991([21]) or by virtue of provisions of the Control of Pollution Act 1974 not having been brought into force.
Salmon and Freshwater Fisheries Act 1975 (c. 51)	Section 4.
Building Act 1984 (c. 55)	Section 59.
The Planning (Hazardous Substances) Act 1990 (c. 10)	The whole Act.
Environmental Protection Act 1990 (c. 43)	Part III (subject to regulation 47(3) of the Waste (England and Wales) Regulations 2011)([22]).
Water Industry Act 1991 (c. 56)	Sections 72, 111, and 113(6); In Part IV, Chapter III; In Schedule 8, paragraphs 2 to 4 so far as they re-enact provisions of sections 43 and 44 of the Control of Pollution Act 1974([23]).
Water Resources Act 1991 (c. 57)	Sections 82, 84, 92, 93, 161-161D, 190, 202, and 203; In Schedule 25, paragraph 6.
Clean Air Act 1993 (c. 11)	Section 16.
Marine and Coastal Access Act 2009 (c. 23)	Section 155."

([20]) 1991 c. 57.
([21]) 1991 c. 60.
([22]) S.I. 2011/988.
([23]) 1974 c. 40.

SCHEDULE 1

Regulation 16

Consequential amendments

PART 1

Public General Acts

Continental Shelf Act 1964

In section 7 of the Continental Shelf Act 1964([24])(radioactive substances), omit—

(a) "for the purposes of the Radioactive Substances Act 1993 (and any orders and regulations made thereunder), or", and

(b) "of that Act or".

Control of Pollution Act 1974

In section 30(5)(b) of the Control of Pollution Act 1974 (power to apply Part 1 of that Act to radioactive waste)([25]) omit "the Radioactive Substances Act 1993,".

PART 2

Subordinate legislation

The Civil Jurisdiction (Offshore Activities) Order 1987

In article 4 of the Civil Jurisdiction (Offshore Activities) Order 1987([26]), (the title to which article becomes "Application of the Wireless Telegraphy Act 1949 and the Environmental Permitting (England and Wales) Regulations 2010"), omit the words "the Radioactive Substances Act 1993, any regulations or orders under either of those Acts (subject, however, in the case of such regulations or orders made hereafter, to any contrary intention appearing therein) and".

The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999

In Schedule 2 to the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999([27]), in paragraph 3(g) of the table, in column 2, for "paragraph 5(2)(b)" substitute "paragraph 11(2)(b)".

The Hazardous Waste (England and Wales) Regulations 2005

—(2) The Hazardous Waste (England and Wales) Regulations 2005([28]) are amended as follows.

([24]) 1964 c. 29; section 7 amended by the Radioactive Substances Act 1993 (c. 12), the Petroleum Act 1998 (c. 17) and S.I. 2010/675.

([25]) 1974 c. 40. Section 30 was prospectively repealed by the Environmental Protection Act 1990 (c. 43), section 162 and Schedule 16, Part 2, on a date to be appointed, and amended by S.I. 2010/675.

([26]) S.I. 1987/2197, amended by S.I. 2010/675.

([27]) S.I. 1999/293.

([28]) S.I. 2005/894; regulations 5(1) and 15(1) were amended by S.I. 2010/675.

(3) In regulation 5(1), insert the following definition after the definition of "radioactive substances activity"—

""radioactive substances exemption" has the meaning given in regulation 2(1) of the Environmental Permitting Regulations;".

(4) In regulation 15(1)(a), for "section 15 of the Radioactive Substances Act 1993", substitute "a radioactive substances exemption".

The Hazardous Waste (Wales) Regulations 2005

The Hazardous Waste (Wales) Regulations 2005([29]) are amended as follows

(a) in regulation 5(1) (general interpretation), insert the following definition after the definition of "radioactive substances activity"—

""radioactive substances exemption" has the meaning given in regulation 2(1) of the Environmental Permitting Regulations;"; and

(b) in regulation 15(1)(a) (radioactive waste), for "section 15 of the Radioactive Substances Act 1993", substitute "a radioactive substances exemption".

The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007

Regulation 6(2)(h) of the Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007([30]) (duty of competent authorities) is omitted.

The Waste (England and Wales) Regulations 2011

—(5) Regulation 47 of the Waste (England and Wales) Regulations 2011([31]) (radioactive waste) is amended as follows.

(6) For paragraph (1), substitute—

"(1) This regulation applies to radioactive waste—

(a) which is a specified waste; and

(b) in respect of which a person—

(i) is carrying on a radioactive substances activity described in paragraph 11(2)(b) or (c) or (4) of Part 2 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2010; and

(ii) is exempt from the requirement for an environmental permit under regulation 12(3) of those Regulations for that activity.".

(7) In paragraph (4)—

(a) in the definition of ""radioactive waste" and "radioactive substances activity"" for "paragraphs 4 and 5" substitute "paragraphs 3 and 11";

(b) omit the definition of "specified order";

(c) insert the following definitions in the appropriate place alphabetically—

""radioactive substances exemption" means an exemption under Part 7 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2010 from the requirement for an environmental permit under regulation 12 of those regulations in respect of a radioactive substances activity;"

""specified waste" means—

(a) NORM waste (as that term is defined in Part 7 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2010; or

(b) the waste described in the first, second or sixth row of column 1 of table 6 in Part 7 of Schedule 23 to the Environmental Permitting (England and Wales) Regulations 2010.".

([29]) S.I. 2005/1806 (W 138); regulations 5(1) and 15(1) were amended by S.I. 2010/675.
([30]) S.I. 2007/1842.
([31]) S.I. 2011/988.

SCHEDULE 2

Regulation 18

Exemption orders

Statutory Instrument Number	*Citation*
S.I. 1962/2645	The Radioactive Substances (Exhibitions) Exemption Order 1962
S.I. 1962/2646	The Radioactive Substances (Storage in Transit) Exemption Order 1962
S.I. 1962/2648	The Radioactive Substances (Phosphatic Substances, Rare Earths etc) Exemption Order 1962
S.I. 1962/2649	The Radioactive Substances (Lead) Exemption Order 1962
S.I. 1962/2710	The Radioactive Substances (Uranium and Thorium) Exemption Order 1962
S.I. 1962/2711	The Radioactive Substances (Prepared Uranium and Thorium Compounds) Exemption Order 1962
S.I. 1962/2712	The Radioactive Substances (Geological Specimens) Exemption Order 1962
S.I. 1963/1831	The Radioactive Substances (Waste Closed Sources) Exemption Order 1963
S.I. 1963/1832	The Radioactive Substances (Schools etc) Exemption Order 1963
S.I. 1963/1836	The Radioactive Substances (Precipitated Phosphate) Exemption Order 1963
S.I. 1967/1797	The Radioactive Substances (Electronic Valves) Exemption Order 1967
S.I. 1980/953	The Radioactive Substances (Smoke Detectors) Exemption Order 1980
S.I. 1985/1047	The Radioactive Substances (Gaseous Tritium Light Devices) Exemption Order 1985
S.I. 1985/1048	The Radioactive Substances (Luminous Articles) Exemption Order 1985
S.I. 1986/1002	The Radioactive Substances (Substances of Low Activity) Exemption Order 1986
S.I. 1990/2512	The Radioactive Substances (Hospitals) Exemption Order 1990
S.I. 1991/477	The Radioactive Substances (Smoke Detectors) Exemption (Amendment) Order 1991
S.I. 1992/647	The Radioactive Substances (Substances of Low Activity) Exemption (Amendment) Order 1992
S.I. 1995/2395	The Radioactive Substances (Hospitals) Exemption (Amendment) Order 1995
S.I. 2002/1177	The Radioactive Substances (Natural Gas) Exemption Order 2002
S.I. 2006/1500	The Radioactive Substances (Testing Instruments) Exemption (England and Wales) Order 2006