

## Environmental Permitting Regulations (England and Wales) 2010

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**How to comply with your  
environmental permit for radioactive  
substances on a nuclear licensed site**

## Record of changes

Version	Date	Change
1.0	April 2010	Issued for launch of EPR phase 2
2.0	August 2012	Revised to reflect changes in the permit template

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## A QUICK GUIDE

This document provides guidance to holders of an environmental permit for radioactive substances activities on nuclear licensed sites on the meaning of the permit conditions, and the outcomes we expect operators to achieve.

This document does not provide any technical guidance on the techniques or measures to be used by operators. Our RSR Environmental Principles and other more specific guidance provide more detailed guidance.

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# Introduction

1. This guidance document sets out the meaning of the conditions of your radioactive substances regulation (RSR) environmental permit for

- the receipt and disposal of radioactive waste from and on nuclear sites;
- tenants who keep or use open sources on nuclear sites.

Tenants and licensees (in relation to mobile radioactive apparatus) should have regard to separate advice on the keeping or use of sealed sources, where relevant.

2. The purpose of the document is so you understand the requirements imposed by, and the outcomes to be achieved by, the permit as whole and its individual conditions. The document does not, in general, contain any detailed technical guidance on specific measures you need to undertake. We have published general guidance on RSR in the form of

- RGN RSR1 Environmental Principles (General principles which apply across all RSR activities);
- RGN RSR2 The regulation of radioactive substances activities on nuclear licensed sites.

RSR1 establishes a standardised framework for the technical assessments and judgements that our regulators have to make. It provides guidance that helps underpin the decisions we make, including those about permitting and compliance where we regulate directly and where we are consultees or otherwise have influence. RSR2 describes how we regulate the receipt and disposal of radioactive waste on nuclear sites.

3. We have published other more specific guidance on issues such as management arrangements, optimisation (use of BAT), monitoring etc on our [nuclear guidance page](#) and [for Near-surface Disposal Facilities on Land for Solid Radioactive Wastes](#). We will have regard to our principles and other guidance when assessing applications for new permits, variations, etc and assessing compliance with permit conditions.

4. In broad terms the RSR environmental permit for disposals is based on the following approach

- you must use Best Available Techniques (BAT) to minimise the generation and disposal of radioactive waste so as to reduce the impact on members of the public to a level that is as low as reasonably achievable (ALARA) and to protect the environment. This is principally conditions 2.3.1, 2.3.2 and 2.3.3, although there are other conditions which address specific aspects of BAT;
- you must have suitable management arrangements, including sufficient competent persons and resources, to comply with your permit (condition 1.1.1);
- you may only dispose of radioactive waste in the manner and amounts specified in your permit (conditions 3.1.1, 3.1.2 and 3.1.3);
- you must undertake such monitoring, using BAT, as necessary to demonstrate compliance with your permit (we do not set specific monitoring, or reporting requirements in the permit) (condition 3.5.1);
- you must make and keep records demonstrating compliance and provide information to us as requested (several conditions).

5. The permit is structured as follows
- Part 1 Management
  - Part 2 Operations
  - Part 3 Disposals of radioactive waste and monitoring
  - Part 4 Information
  - Schedules (which set out limits and other detailed issues)
6. Some permit conditions allow for further detailed requirements, approvals or agreements. We will only use these to set out matters of detail, and these will be clearly linked to the original permit condition. We call these second-tier documents “Environment Agency Requirements” (EARs) and for a site as a whole the “CEAR” (Compilation of Environment Agency Requirements). We will place these on the public register subject to the normal considerations of confidentiality and national security. This continues the practice under RSA93.

### Changes to the permit template.

7. Table 1 lists the changes to the generic permit conditions. We have indicated the changes in red text in the following chapters: substantive changes to the supporting text are in yellow highlight. In addition to these Annex B covers conditions specific to burial and Annex C explains the operation of the exemption regime in relation to VLLW.

<b>Table 1 : summary of changes</b>		
<b>Permit condition</b>	<b>Change</b>	<b>Reason</b>
1.1.4	Introduction of “RWA” (replacing “RPAs, or other such qualified experts approved by the Environment Agency in writing”,	To reflect introduction of the Agencies’ RWA scheme
2.3.3 (b) and 3.1.3	Introduce requirement at 2.3.3 (b) to “characterise, sort and segregate solid and non-aqueous liquid radioactive wastes, to facilitate their disposal by optimised disposal routes”	To make this an explicit requirement for clarity in support of new condition 3.1.3
	New condition 3.1.3 <i>Subject to condition 3.1.1, the operator shall dispose of each form of solid and non-aqueous liquid radioactive waste by an optimised disposal route for that waste form</i>	To make this an explicit requirement for clarity.
2.5.2	Revised wording of <i>The specific disposals and receipts of radioactive waste identified in schedule 1 table S1.3B shall not commence until the relevant measures specified in that table have been completed</i>	amended – to make clear this applies to disposals & receipts of radioactive waste rather than operation of plant.
3.2.1 (b)	New condition <i>unless otherwise agreed in writing by the Environment Agency [the operator shall]</i> <i>(i) define, document and carry out an environmental monitoring programme;</i> <i>(ii) use the results of that programme to carry out an annual retrospective assessment of the dose to the representative person</i> <i>(iii) inform the Environment Agency in writing in advance of any modifications affecting the extent of that programme or that have a potential to change the results obtained</i>	To 1) put the requirement for retrospective dose assessment into the permit (rather than the CEAR) and apply it consistently; 2) put environmental monitoring on the same basis as discharge monitoring,

# 1 Management

## Conditions 1.1.1, 1.1.2, 1.1.3, and 1.1.4

1.1.1 *The operator shall manage and operate the activities:*

- (a) *in accordance with a written management system that is sufficient to ensure compliance with the conditions of this permit; and*
- (b) *using sufficient competent persons and resources.*

1.1.2 *The operator shall maintain records demonstrating compliance with condition 1.1.1.*

1.1.3 *Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.*

1.1.4 *The operator shall manage and operate the activities in consultation with such suitable **Radioactive Waste Advisors** as are necessary for the purpose of advising the operator as to compliance with this permit.*

### Condition 1.1.1

This condition means that you must put in place and implement appropriate management arrangements to ensure that you comply with your permit conditions. We have provided guidance on management arrangements in section 5.1 of the [RSR Environmental Principles](#) and, in more detail, in our guidance on [“Management Arrangements at Nuclear Sites”](#) and [“Radioactive Waste Management Arrangements”](#) in document [“RSR RGN2: The regulation of radioactive substance activities on nuclear licensed sites”](#). We will use these to assess your management arrangements.

We have also published joint guidance on how you can meet our and ONR’s expectations for management arrangements through a single [integrated management prospectus](#). We hope this integrated approach will offer you a more efficient and effective way to demonstrate your compliance to ONR and ourselves, as well as supporting a more co-coordinated approach to our regulation of nuclear sites

You may also operate other EPR activities on your site. Where you do, you should follow and apply the guidance in this section to all the activities you operate. You will also need to apply any specific additional requirements in relation to any non-RSR activities that are described in the relevant technical guidance. This is to ensure that you adopt a management system which fully addresses the range of activities you operate, in a way which is consistent with our and other regulatory requirements

### Condition 1.1.2

You must make and keep reliable records showing how you have implemented your management arrangements. These are an essential part of your management system.

Section 4 of the permit tells you how to keep the records. There may be additional guidance on the manner in which records are held in other technical guidance. For clarity, records include “notes” and “receipts” (conditions 2.6.1 and 3.15) and may be held in electronic form.

[Our Joint regulatory guidance on radioactive waste management](#) of HA wastes includes [Module 3d on “managing information and records relating to radioactive waste management in the United Kingdom”](#). Although this relates specifically to higher activity (HA) wastes, the general principles on record keeping in this guidance are applicable to other forms of radioactive waste and we therefore require operators to apply them appropriately and proportionately to records held in accordance with the RSR permit

### **Condition 1.1.3 and 2.3.7**

See condition 2.3.7 for the display of your permit and making other documentation available to your staff.

### **Condition 1.1.4**

There is a requirement under article 47 of the BSSD that operators appoint advisers, known as “qualified experts”, to advise them on radiological protection. In the UK we call the qualified expert for radioactive waste management and environmental radiation protection a 'Radioactive Waste Adviser' (RWAs) and the UK Environment Agencies have set up a scheme defining the roles of RWAs. The details of the scheme including the appointment of RWAs and their syllabus are published on the SEPA website under “[Radioactive Waste advisors](#)” and are not repeated here.

Condition 1.1.4 requires you to appoint suitable RWA(s) and to consult them as appropriate on the matters set out in the scheme, to meet the BSSD requirement. An RWA may be an individual, or the duties may be shared amongst a group of people. The latter is known as a ‘corporate RWA’. The process of approving individual RWAs or corporate RWAs is set out in the scheme: we will no longer approve individuals through the CEAR. And, for the avoidance of doubt, the role of RWA is limited to those matters specified in the RWA scheme including the syllabus.

You will need to be able to show that your RWAs (or corporate RWA(s)) are “suitable” to give relevant advice on your business, namely that they have “the specific knowledge, experience and competence required for giving advice on the particular radioactive waste management and environmental radiation protection issues for which the permit holder is making the appointment”.

We expect you to maintain records showing when you consulted a RWA and how you acted upon that advice.

## 2 Operations

### 2.1 Permitted activities

2.1.1 *The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).*

EPR lists many different activities but you are only permitted to carry out those activities listed in your permit. However, you may carry out other activities on the site provided that:

- they do not need a permit under any legislation; or
- they are exempt from the requirement to have a permit, eg activities covered by the RSR exemptions; or
- you have a separate permit issued by the Environment Agency or by another regulator such as the local authority.

Condition 2.1 and table S1.1 also specify the justified practice(s) or work you are permitted to undertake. You are only permitted to undertake the permitted EP activities (disposal of radioactive waste etc) in relation to the justified practice(s) or work specified in table S1.1. In general, you will need to apply for a variation if you wish to change the nature of the activities, practice(s) or work undertaken.

**Conditions 2.1.2 and 2.1.3** These conditions will only be included in permits **for tenants who use open sources.**

2.1.2 *Only radioactive material in the form of open sources comprising the radionuclides specified in table S2.1 in schedule 2, together with any associated decay products present in amounts not exceeding those which could be present through radioactive decay of the specified radionuclides, shall be kept or used on the premises.*

2.1.3 *The activity of each radionuclide kept or used on the premises shall not exceed the relevant maximum activity specified in table S2.1 in schedule 2*

If you use open sources you must maintain your holdings on the premises to within the limits specified in table S2.1 in schedule 2

### 2.2 The site

2.2.1 *The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.*

You are only able to undertake the activities permitted in condition 2.1 within the area of land shown on the site plan in schedule 7. [RGN RSR2 “The regulation of radioactive substance activities on nuclear licensed sites”](#) provides guidance on how you define the area of the site for the purposes of this condition. If you wish to expand the area of the site where you carry out your RSR activities, you need to apply for a variation. If you wish to reduce the area, you will need to apply for surrender either in full (the whole site) or in part. Again RGN RSR2 gives some advice on that process.

## 2.3 Operating techniques

- 2.3.1 *The operator shall use the best available techniques to minimise the activity of radioactive waste produced on the premises that will require to be disposed of on or from the premises.*
- 2.3.2 *The operator shall use the best available techniques in respect of the disposal of radioactive waste pursuant to this permit to:*
- (a) *minimise the activity of gaseous and aqueous radioactive waste disposed of by discharge to the environment;*
  - (b) *minimise the volume of radioactive waste disposed of by transfer to other premises;*
  - (c) *dispose of radioactive waste at times, in a form, and in a manner so as to minimise the radiological effects on the environment and members of the public.*
- 2.3.3 *The operator shall use the best available techniques to*
- (a) *exclude all entrained solids, gases and non-aqueous liquids from radioactive aqueous waste prior to discharge to the environment;*
  - (b) *characterise, sort and segregate solid and non-aqueous liquid radioactive wastes, to facilitate their disposal by optimised disposal routes;*
  - (c) *remove suspended solids from radioactive waste oil prior to incineration.*

Conditions 2.3.1 and 2.3.2, taken together, are considered to address the requirements of the 1996 BSS Directive and Part 4 1(a) of Schedule 23 of the Environmental Permitting Regulations, taking into consideration Government Guidance on this matter (see the [DECC RSR Guidance](#) and the [Statutory Guidance concerning the regulation of radioactive discharges into the environment](#)). **That is 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”.**

Condition 2.3.1 requires you to use BAT to minimise the activity of radioactive waste **produced** that will ultimately require disposal under the authorisation, ie you should minimise the production of radioactive waste and, where possible, prevent its arising. This requirement does not apply if you are only disposing of radioactive waste created elsewhere.

Having minimised the activity of radioactive waste produced, condition 2.3.2 requires you to use BAT to minimise the activity of that part of the radioactive waste that is disposed of, in gaseous or aqueous form, by discharge to the environment, and to minimise the volume of radioactive waste disposed of by transfer to other premises, for example by using practices such as compaction or incineration. **This is the concentrate and contain principle in the Statutory Guidance and the UK Strategy for discharge reduction.** You must also dispose of radioactive waste in a way which minimises radiological effects (for example by using discharge arrangements which optimise dispersal of the radioactive waste).

Conditions 2.3.1 and 2.3.2 apply to all aspects of the nuclear site processes, not just radioactive waste management processes, which have a bearing on the production and disposal of radioactive waste. See [RSR2 “The regulation of radioactive substances activities on nuclear licensed sites” for examples](#).

BAT is defined in Annex A of this document. You should note that “techniques” is defined to include

*“both the technology used and the way in which the installation is designed, built, maintained, operated and dismantled”*

Hence through this definition, conditions 2.3.1, 2.3.2 and 2.3.3 include consideration of matters such as design, construction, operation, maintenance, decommissioning, training of staff etc. Some of these matters are repeated in other conditions for clarity and to ensure compliance with specific requirements in regulations. We have provided separate guidance on BAT and how you assess and identify the techniques that represent BAT in the document [RSR Principles of Optimisation](#). There is also a [nuclear industry code of practice on BAT](#).

In relation to higher activity wastes we operate as set out in the “[Fundamentals of the management of radioactive waste: An introduction to the management of higher-level radioactive waste on nuclear licensed sites](#)” and associated guidance. This work is done through Radioactive Waste Management Cases: we will not duplicate this work through application of the BAT conditions.

Conditions 2.3.1 and 2.3.2 are outcome focussed. We use condition 2.3.3 to describe, for clarity and emphasis, any specific matters where we require operators to use BAT in pursuit of the outcomes specified in conditions 2.3.1 and 2.3.2 (generally these are matters that have caused problems historically). 2.3.3(a) relates to ensuring adequate dispersal in the aquatic environment, 2.3.3(b) to use of the waste management hierarchy and making best use of available disposal routes [see also condition 3.1.3], and 2.3.3(c) to achieving good combustion conditions in oil burners.

## **Alternative 2.3.1/2**

### **For tenants with open sources**

2.3.1 *The operator shall use the best available techniques to:*

*(a) minimise the activity of radioactive material kept or used on the premises;*

*(b) minimise the activity of radioactive waste produced on the premises that will require to be disposed of on or from the premises;*

*(c) prevent:*

*(i) the loss of any radioactive material or radioactive waste;*

*(ii) access to any radioactive material or radioactive waste by any person not authorised by the operator.*

See the relevant sections of “[How to comply with your EPR RSR environmental permit –open sources and receipt, accumulation and disposal of radioactive waste on non-nuclear premises](#)”

## **Conditions 2.3.4, 2.3.5 and 2.3.6**

2.3.4 *The operator shall maintain in good repair the systems and equipment provided:*

*(a) to meet the requirements of conditions 2.3.1, 2.3.2 and 2.3.3;*

*(b) to carry out any monitoring and measurements necessary to determine compliance with the conditions of this permit;*

- (c) *to measure and assess the exposure of members of the public and radioactive contamination of the environment.*

2.3.5 *The operator shall check, at an appropriate frequency, the effectiveness of systems, equipment and procedures provided to meet the requirements of conditions 2.3.1, 2.3.2 and 2.3.3.*

2.3.6 *The operator shall have and comply with appropriate criteria for the acceptance into service of systems, equipment and procedures for:*

- (a) *carrying out any monitoring and measurements necessary to determine compliance with the conditions of this permit;*
- (b) *measuring and assessing exposure of members of the public and radioactive contamination of the environment.*

Condition 2.3.4 requires you to maintain all systems and equipment which bear on the production of radioactive waste requiring disposal, the minimisation of radioactive waste discharged to the environment and the minimisation of the radiological impact; that is, all the systems which contribute to the use of BAT in conditions 2.3.1, 2.3.2 and 2.3.3. The use of the word “provided” rather than “used” is intended to ensure that back-up systems are maintained as well as those in use. This condition reflects that poor maintenance of plant, instrumentation or infrastructure is a common cause of the production of radioactive waste. **We expect you to keep a schedule or some other system specifying the “systems and equipment” to be maintained under this condition and the frequency of maintenance. You should also record when maintenance is carried out and any associated actions.**

Condition 2.3.5 addresses the requirements of paragraph 1(b) of Article 47 of BSSD, in checking the effectiveness of technical devices for protecting the environment and the population. **It means that you must regularly check that your techniques are continuing to achieve what they were designed or expected to achieve.**

Condition 2.3.6 addresses the requirements of paragraph 1(c) of Article 47 of BSSD, in relation to “measuring instruments” associated with BAT-related or disposal equipment. **It means that, prior to bringing into service such systems, equipment and procedures (for the first time or after repair, etc), you must establish and carry out a testing programme to ensure that acceptable results will be obtained in the particular environmental conditions and over the particular parameter range in which they are expected to operate.**

### **Condition 2.3.7 or deemed condition in existing permits and condition 1.1.3**

2.3.7 *The operator shall post copies of this permit on the premises, in such characters and in such positions to be conveniently read by persons who have duties on the premises which are or could be affected by the matters set out in this permit.*

This condition replicates the requirements of section 19 of RSA93. For permits issued under RSA93 this is a deemed provision in the Regulations, that is the Regulations place this condition on you directly. For permits issued after 6/4/2010 this will appear as an explicit permit condition.

In either case you must post (ie display) your permit such that persons having duties on your premises (ie staff and contractors) and whose duties may be affected by the permit conditions can conveniently read it. They should also have ready access to any other information they need to ensure that they act so as to comply with the permit. This could be access to this document or other instructions more targeted to their responsibilities.

**You do not need to post the CEAR but staff should have ready access to this.**

## Conditions 2.3.8 and 2.3.9 (These conditions will only apply to tenants who use open sources)

2.3.8 *The operator shall only keep or use open radioactive sources:*

- (a) *containing the radionuclides or groups of radionuclides specified in Schedule 2 table S2.2, together with any associated decay products present in amounts not exceeding those which could be present through radioactive decay of the specified radionuclides;*
- (b) *where the activity of a specified radionuclide in all the open sources on the premises at any one time does not exceed the relevant limit specified in Schedule 2 table S2.2*

2.3.9 *The operator shall maintain records of open radioactive sources showing:*

- (a) *the radionuclide present, the date on which it was received and the activity on that date;*
- (b) *so far as is reasonably practicable its location on the premises;*
- (c) *if it has been removed from the premises, the date of removal, the activity on that date and the name and address of the person to whom it was transferred; and*
- (d) *the activity present on the premises at the end of each calendar month.*

If you use open sources you must maintain your holdings on site to within the limits specified in table S2.2. You must keep records as set out in condition 2.3.9 of the receipt and disposal of sources, the activity of the sources when received and disposed of and their location on the premises. You must also keep the details specified in 2.3.9 (c) about when and how you disposed of the sources. You must also maintain details of the total activity of such sources at the end of each month.

## Conditions 2.5.1 and 2.5.2

2.5.1 *The activities<sup>1</sup> shall not be brought into operation until the measures specified in schedule 1 table S1.3A have been completed.*

2.5.2 *The specific disposals and receipts of radioactive waste identified in schedule 1 table S1.3B shall not commence until the relevant measures specified in that table have been completed*

Under condition 2.5.1 you cannot start to carry on any of the activities listed in schedule 1 table S1.1 until all the measures specified in schedule 1 table S1.3A have been completed. This allows us, for example, to require reports, such as commissioning reports, to confirm information supplied in an application, before radioactive waste is first received on site, or disposals first made. Condition 2.5.1 can only apply before the activities are **first** carried on, that is before (any) radioactive waste is first received on site or first disposed of.

Condition 2.5.2 allows us to prevent any new specific receipts or disposals until the measures specified in schedule 1 table 1.3B have been completed. This allows us, for example, to prevent new disposals of radioactive waste, until the measures in schedule 1 table S1.3B have been completed, in situations where such disposals do not require changes in limits or disposal outlets and are therefore not subject to approval under the variation process. This condition can be applied at any time after the commencement of the activities and before the commencement of any specified new form of receipt or disposal.

For clarity, in the absence of any measures being specified under these conditions, you are able to commence activities and change the nature of receipts and disposals to the extent authorised by your permit.

## 2.6 Receipt of radioactive waste

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<sup>1</sup> “activities” means any activity listed in schedule 1 table S1.1.

2.6.1 *The operator shall:*

- a) *for each type of radioactive waste that it is prepared to receive, produce a written specification of the information required to:*
  - (i.) *enable the disposal of that type of radioactive waste in compliance with this permit; or*
  - (ii.) *where disposal of that type of radioactive waste is not currently permitted, sufficiently characterise that waste to, as far as reasonably practicable, enable its future disposal;*
- (b) *provide that written specification to any person from whom the operator is prepared to receive radioactive waste of that type;*
- (c) *only accept a consignment of radioactive waste that is accompanied by a legible note providing the information specified in 2.6.1(a);*
- (d) *keep a copy of any such note received;*
- (e) *provide a receipt to the consignor in respect of each consignment of radioactive waste that the Operator accepts.*

2.6.2 *The operator shall ensure that any radioactive waste which does not comply with the specifications produced pursuant to condition 2.6.1 is returned to the consignor as soon as reasonably practicable, unless otherwise agreed in writing with the Environment Agency*

These conditions complement 3.1.5 and 3.1.6 to

- facilitate the transfer of radioactive waste between waste consignors and consignees,
- ensure adequate exchange of information;
- ensure the waste is disposed of in accordance with permit conditions; and
- ensure the maintenance of records of transfers of radioactive waste.

You should prepare a written specification for each type of radioactive waste you are prepared to receive, covering matters such as activity content, chemical composition, packaging etc as is necessary to ensure you only receive radioactive waste which you can in turn dispose of in accordance with your permit conditions. Where there is currently no permitted disposal route you should ensure that the wastes received are sufficiently characterised to enable their future disposal as far as is reasonably practicable.

You should make such written specifications available to prospective consignors and should only accept waste when accompanied by a consignment note setting out the necessary information to confirm that radioactive waste received meets the relevant specifications. You must keep the consignment notes received.

Paragraphs 2.6.1 and 2.6.2 do not apply to wastes received as a result of participation in NAIR or the Radsafe schemes, as a result of condition 2.6.5.

These conditions do not apply to small scale return of radioactive waste which originated on your site. For examples samples sent to another site for analysis or testing and which are subsequently returned to you.

**Conditions 2.6.3 and 2.6.4** (These conditions will only be placed in permits where the operator receives radioactive waste for the purpose of final disposal on or from the premises)

2.6.3 *Before the operator first receives radioactive waste from a consignor for the purpose of final disposal of that waste from or on the premises, the operator shall, at the earliest opportunity, inform the local authority, in whose area of responsibility the premises is situated, of the origin and nature of the radioactive waste.*

2.6.4 *The provisions of 2.6.3 do not apply*

*(a) where the waste consignor is exempt from the requirement to hold an environmental permit for the disposal of radioactive waste;*

*(b) to the extent that it would require the disclosure of information relating to sealed radioactive sources*

These conditions will only be placed in your permit where you receive radioactive waste for the purpose of its final disposal on or from your premises, eg if you operate an incinerator or undertake on-site burial of radioactive waste. If so, you will need to inform the local authority<sup>2</sup>, in whose area your premises is located, before you **first** receive radioactive waste from a consignor, stating

- your name and address ;
- the name and address of the consignor;
- description of the type of radioactive waste to be received using the recognised waste classifications (eg LLW);
- the date on which that radioactive waste is expected to be received for the first time.

You must inform the local authority at the earliest opportunity: we would expect that to be as soon as you have made arrangements for the first transfer of waste. In any event you must inform the local authority before you receive the radioactive waste on site. You need only inform the local authority of the first consignment of waste: you do not need to inform them of any subsequent transfers.

You do not need to inform the local authority if the transfer is exempt from the requirement for an environmental permit for the disposal of radioactive waste. This recognises that in practice you may not be aware of or have details about radioactive waste being disposed of under the exemption provisions. You must not provide the local authority with any information about a consignor sending you sealed radioactive sources for final disposal, including the fact that such a transfer will take place. That is you must not inform the local authority of the proposed receipt nor provide any information about it

### **Condition 2.6.5**

*2.6.5 The provisions of paragraph 2.6.1 to 2.6.x do not apply to any radioactive waste collected as a result of the operator's participation in the National Arrangements for Incidents involving Radioactivity or in the Radsafe scheme.*

Condition 2.6.5 dis-applies conditions 2.6.1, 2.6.2, and 2.6.3, 2.6.4 if relevant, in relation to radioactive waste received as a result of participation in NAIR or Radsafe, recognising that these conditions are not practicable for wastes so received.

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<sup>2</sup> In non-unitary areas, you should also inform the relevant county council.

## 3 Disposals of radioactive waste and monitoring

### Disposals of radioactive waste

#### Conditions 3.1.1, 3.1.2 and 3.1.3

- 3.1.1 *Subject to condition 3.1.4, there shall be no disposals of radioactive waste except of the types of radioactive waste and by the disposal routes specified in schedule 3 or otherwise agreed in writing by the Environment Agency.*
- 3.1.2 *The limits on disposals given in schedule 3 shall not be exceeded.*
- 3.1.3 *Subject to condition 3.1.1, the operator shall dispose of each form of solid and non-aqueous liquid radioactive waste by an optimised disposal route for that waste form.*

#### How to comply

These conditions together with the tables in schedule 3 will specify

- the types of radioactive waste you may dispose of;
- how you may dispose of it, eg by discharge to air, or transfer to another person; and
- limits on what you may dispose of.

You may not dispose of types of radioactive waste other than from the outlets and disposal routes specified and limited in schedule 3, or otherwise agreed in writing with us. The permit will specify all those outlets that have, either individually or collectively, significant discharges. We may choose to approve minor disposal outlets (as “approved outlets”) in the CEAR, rather than specify these in the tables to the permit, but these will not constitute in total more than 5%, or such other limits specified in the permit, of the site limits on discharges. We recognise that some discharges occur via ill-defined routes and entries such as “reactor leakage routes” may be necessary. We will include relevant incinerator stacks to formally authorise the discharge of waste gases from incineration, although we may set limits on the inputs to incinerators rather than the discharges from their stacks.

You must not make any disposals of radioactive waste that could result in a direct or indirect discharge to groundwater unless specifically permitted to do so and meeting the requirements of Schedule 22 to the Environmental Permitting Regulations 2010.

Your permit will normally contain standard provisions in schedule 3 for the transfer of solid and non-aqueous wastes. We do not normally set limits on such disposals. We regard the choice of disposal option to be an aspect of the use of BAT under conditions 2.3.2 but for clarity we have also added a new condition [3.1.3] to make explicit these requirements in relation to solid and non-aqueous wastes. We will provide further guidance on this topic in the “Principles of optimisation” guidance.

The wording in Schedule 3 in relation to LLW and non-aqueous liquid wastes is to give you flexibility, subject to requirements of conditions 2.3.1, 2.3.2 and 3.1.3, in your choice of disposal options and of the specific operators or sites to receive the waste. This is to facilitate the disposal of such waste in accordance with the 2007 Government Policy for the [Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom](#). For clarity the “holder of environmental permit” is defined to include an operator authorised under RSA93 in Scotland or Northern Ireland, so you may transfer waste there if appropriate. However, we retain the discretion to restrict transfers to specified sites and set limits or other conditions on disposal where necessary to deliver

statutory or policy requirements, for example to deliver the requirements of the proximity principle and the waste hierarchy.

You can apply for the transfer of other waste forms and to other destinations beyond those set out in the template.

You may dispose of VLLW under the exemption provisions where

- you can dispose of all your VLLW under the exemption; and
- you are not authorised for the disposal of VLLW in the permit.

Annex C provides more information on the use of the VLLW exemption.

The requirement to use BAT under conditions 2.3.1, 2.3.2, and where relevant under 2.3.3, applies to all disposals and at all times. That is, it is not sufficient merely to comply with your disposal limits. If lower disposals can be achieved through the use of BAT then you must use BAT to that end.

#### **Condition 3.1.4**

3.1.3 *The operator may dispose of radioactive waste, not being radioactive waste otherwise authorised to be disposed of, which is collected as a result of the operator's participation in the National Arrangements for Incidents involving Radioactivity or in the Radsafe scheme provided that the operator:*

- transfers the radioactive waste to a person whom the Environment Agency has agreed in writing may receive that radioactive waste;*
- as soon as practicable provides available details in writing to the Environment Agency of the nature of the radioactive waste, the radionuclides present, their activities and the manner and date of disposal.*

This paragraph makes provision for the disposal of radioactive waste as part of your involvement in NAIR and the Radsafe scheme. You may be able to dispose of this waste within the disposal options in your permit. In this case the disposal will count towards any limits in your permit for such disposals. If you are not able to dispose of the waste within your permitted routes, we will agree with you how you can dispose of the waste.

#### **Transfers of radioactive waste**

Where you are permitted to dispose of radioactive waste by transfer to another person, your permit will contain the following conditions.

#### **Conditions 3.1.5, 3.1.6, and 3.17**

3.1.5 *The operator shall ensure that the transfer of radioactive waste is in accordance with the directions of the person to whom the radioactive waste is transferred that are necessary to enable that person to comply with all relevant regulatory requirements.*

3.1.6 *The operator shall:*

- ensure that the person to whom radioactive waste is transferred receives at the time of transfer of each consignment a clear and legible note signed on the operator's behalf*

- (i.) *stating the total activity in the consignment of each relevant radionuclide or group of radionuclides listed in the relevant table in schedule 3; or*
- (ii.) *stating, when no relevant radionuclide or group of radionuclides is specified in schedule 3, the total activity in the consignment of each radionuclide or group of radionuclides as listed in the written specification of the person to whom the radioactive waste is transferred.*
- (b) *obtain a note signed on behalf of the person to whom radioactive waste is transferred, at the time of transfer, stating that the transfer has taken place;*
- (c) *keep a copy of any note issued under 3.1.6(a) and any note received under 3.1.6(b).*

3.1.7 *If required by the Environment Agency, the operator shall ensure that any consignment or part of any consignment of radioactive waste found, following transfer, not to be in accordance with the conditions of this permit:*

- (a) *is packaged in accordance with the appropriate transport regulations;*
- (b) *is returned as soon as is reasonably practicable to the operator's site.*

Conditions 3.1.5, 3.1.6 and 3.1.7 cover how you transfer radioactive waste to other people. These conditions complement 2.6.1 and 2.6.2 and have the matching aims to those described above for condition 2.6.1.

When you transfer radioactive waste to other people you must comply with any directions from them that are necessary to enable them to comply with their regulatory requirements (condition 3.1.5).

You must provide the person receiving the waste with the information set out in condition 3.1.6 including any information they specify (see condition 2.6.1 relating to the written specification for waste receipt provided by the waste consignee). You must send a written, signed, note with the consignment containing that information and you should obtain a written, signed, confirmation of the transfer at the time the transfer takes place. You must keep a record of these consignment notes.

Under condition 3.1.7 we may require you to take back waste where the transfer has been found not to be in compliance with the conditions of your permit. In this case you will be responsible for any (re)packaging of the waste to enable it to be transferred back to you.

### **Condition 3.1.8**

3.1.8 *The operator shall, not later than 14 days after the end of each month or within such longer period as the Environment Agency may approve in writing, record all disposals of radioactive waste made during that month*

You must record all disposals of radioactive waste within 14 days of the end of each month unless we approve a longer period. Any such approvals will be set out in an EAR. Your records should show clearly and legibly the following, unless we agree otherwise:

- the type of waste and the disposal route;
- the name of each radionuclide or group of radionuclides, specified in the schedule, which is present in the waste;
- the activity of each such radionuclide or group of radionuclides per cubic metre of the waste;
- for LLW waste, the activity of each such radionuclide or group of radionuclides per tonne of the waste;
- the total activity of each such radionuclide or group of radionuclides;
- the total volume in cubic metres;

- for LLWR waste, the total mass in tonnes;
- the date and time on which or period during which the disposal took place.

## 3.2 Monitoring

### Conditions 3.2.1 and 3.2.2

3.2.1 *The operator shall:*

- (a) *take samples and conduct measurements, tests, surveys, analyses and calculations to determine compliance with the conditions of this permit;*
- (b) *unless otherwise agreed in writing by the Environment Agency*
  - (i) *define, document and carry out an environmental monitoring programme;*
  - (ii) *use the results of that programme to carry out an annual retrospective assessment of the dose to the representative person;*
  - (iii) *inform the Environment Agency in writing in advance of any modifications affecting the extent of that programme or that have a potential to change the results obtained.*
- (c) *use the best available techniques when taking such samples and conducting such measurements, tests, surveys, analyses and calculations, and carrying out such environmental monitoring programmes and retrospective dose assessment, unless particular techniques are specified in schedule 3 of this permit or in writing by the Agency;*
- (d) *define and document the techniques being employed to determine the activity of radioactive waste disposals and shall inform the Environment Agency in writing in advance of any modifications to those techniques that have a potential to change the results obtained.*

3.2.2 *The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.*

You must carry out the necessary sampling etc. needed to determine compliance with your permit. Condition 3.2.1(a) applies to all appropriate conditions, not just numerical limits. Condition 3.2.1(c) requires you to use BAT when undertaking that sampling and monitoring, including environmental monitoring.

Condition 3.2.1(b) requires you to define, document and implement a programme of environmental monitoring and to carry out an annual retrospective assessment of the dose to the representative person. This is in accordance with paragraphs 4.12 and 4.13 of the [Government RSR Guidance](#). Paragraph 4.12 states

*“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”*

And paragraph 4.13 of the Government Guidance addresses the monitoring requirements to that end. Your programme should be based on Radiological monitoring technical guidance note 2: Environmental radiological monitoring and must be sufficient to undertake appropriate retrospective dose assessments, either annually or at the frequency specified in the CEAR. However, you should note that you may need to undertake environment monitoring for several objectives in addition to the assessment of impact on people : these objectives are set out in the RM TGN2 : see paragraph 3.1 and table 1.1. You must notify us of any changes to the programme or changes that are capable of changing the results obtained.

The relevant part of the CEAR will specify the frequency of the dose assessment if less than annual. We will no longer specify routine environmental monitoring requirements in the CEAR (but under condition 3.2.5 we can require specified non-routine monitoring, including eg environmental monitoring to investigate suspected leaks).

Condition 3.2.1(d) requires you to define and document the techniques used for determining the activity of radioactive waste disposed of, based on the approach set out in Radiological Monitoring Technical Guidance Note 1 Standardised Reporting of Radioactive Discharges from Nuclear Sites<sup>3</sup>. You must notify us of any changes to these techniques that are capable of changing the results obtained.

Numerical limits and levels included in the permit are absolute and not related to a specific measurement method except where we specify a particular method in the permit. For the former, you must use BAT in sampling, analysis and assessment of radioactive waste disposals and environmental monitoring. Where we specify a particular method of measurement in the permit, you must use that method and must carry out associated activities using BAT. In these cases the limit will be set in a way linked to the specified means of analysis.

You must keep records of all the sampling and monitoring you undertake and of any assessments, reports etc you make using that data.

### Condition 3.2.3

3.2.3 *Monitoring equipment, techniques, personnel and organisations employed for the monitoring of disposals and the environment required by condition 3.2.1 or 3.2.5 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.*

The Environment Agency monitoring certification scheme (MCERTS) provides for the product certification of monitoring systems (for example, instruments, analysers and equipment), the competency certification of personnel, and the accreditation of laboratories and organisations involved in sampling. See [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk) for further information on MCERTS certified equipment and [www.ukas.org](http://www.ukas.org) to search for MCERTS accredited stack testing organisations. MCERTS certified equipment, staff and laboratories should be used where available, unless we agree alternative arrangements.

NB for clarity this condition **only** applies where MCERTS certification and accreditation exists for the sampling and monitoring being undertaken. It does not apply to any other monitoring nor does it imply a need for current techniques and personnel to become MCERTS certified or accredited over time.

### Condition 3.2.4

3.2.4 *Permanent means of access shall be provided to enable sampling and monitoring to be carried out in relation to the disposal outlets specified in schedule 3 unless otherwise agreed in writing by the Environment Agency.*

This condition is to ensure that our contractors will be able to undertake sampling and monitoring on site as required. The CEAR will specify where access is not required.

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<sup>3</sup> This guidance is available at [http://www.sepa.org.uk/radioactive\\_substances/publications/guidance.aspx](http://www.sepa.org.uk/radioactive_substances/publications/guidance.aspx)

### Condition 3.2.5

3.2.5 *If required by the Environment Agency, the operator shall*

- (a) *take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Environment Agency specifies;*
- (b) *keep samples, provide samples, or dispatch samples for tests at a laboratory, as the Environment Agency specifies, and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the appropriate transport regulations are complete.*

We will use 3.2.5(a) if we need to specify other testing, monitoring and assessment requirements. We will specify these, as required, in an EAR. We will usually use 3.2.5(b) to specify samples to be provided for our check monitoring programme.

### Condition 3.2.6

3.2.6 *The operator shall carry out:*

- (a) *regular calibration, at an appropriate frequency, of systems and equipment provided for:*
  - (i.) *carrying out any monitoring and measurements necessary to determine compliance with the conditions of this permit;*
  - (ii.) *measuring and assessing exposure of members of the public and radioactive contamination of the environment.*
- (b) *regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.*

Condition 3.2.6 addresses the requirements of paragraph 1(d) of Article 47 of BSSD, in relation to the regular calibration of measuring instruments and regular checking that they serviceable and correctly used. We would expect that you calibrate and check such equipment in accordance with the manufacturers' recommendations and relevant good practice.

## 4 Information

### 4.1 Records

4.1.1 *All records required to be made by this permit shall:*

- (a) *be legible;*
- (b) *be made as soon as reasonably practicable;*
- (c) *if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and*
- (d) *be retained until notified in writing by the Environment Agency that records no longer need to be retained.*

4.1.2 *The operator shall keep on site all records, plans and the management system required by this permit, unless otherwise agreed in writing by the Environment Agency.*

We require you to retain records indefinitely unless we specify otherwise. You must also keep records of any off-site environmental effects including pollution incidents that caused, or are alleged to have caused, harm or health effects. Records may be held electronically. Times should be recorded using the 24-hour clock.

#### Condition 4.1.3

4.1.4 *The operator shall*

*a) retain records made in accordance with any previous relevant permit issued to the operator and related to the premises covered by this permit;*

*b) retain records transferred to the operator, which were made in accordance with any previous relevant permit related to the premises covered by this permit.*

This condition refers to records

- made under a previous RSA93 authorisation held by you; or
- made by a previous operator and transferred to you when you were first took over the permitted activities.

This condition complements condition 4.1.1 to require you to retain records both from your current operation and to retain records relating to earlier operation of the site, whether operated by you or another operator.

### 4.2 Reporting

#### Condition 4.2.1 and 4.2.2

4.2.1 *The operator shall send all reports and notifications required by this permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.*

4.2.2 *The operator shall supply such information in relation to the samples, tests, surveys, analysis and calculations, environmental monitoring and assessments undertaken under conditions 3.5.1 and 3.5.5 in relation to disposals of radioactive waste, in such format and within such timescales as the Environment Agency may specify.*

We use condition 4.2.2 to specify the information you need to supply to us. We will normally use this for the provision of information on discharges, environmental monitoring and for the Pollution Inventory. We may also specify one-off requirements for example to obtain specific plant details. We will specify our requirements in the CEAR.

### **4.3 Notifications**

#### **Conditions 4.3.1 and 4.3.2**

4.3.1 *The operator shall notify the Environment Agency without delay following the detection of:*

- (a) *any malfunction, breakdown or failure of equipment or techniques and any accident, which has caused, is causing or may cause significant pollution or may generate significant amounts of radioactive waste;*
- (b) *the breach of a limit specified in this permit or disposal of radioactive waste other than by a relevant permitted route;*
- (c) *any significant adverse environmental effects that could reasonably be seen to result from the operation of the facility. .*

4.3.2 *Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 within the time period specified in that schedule.*

“without delay” means that you must notify us, as soon as is practicable, of any the matters listed in condition 4.3.1. Significant adverse environmental effects include harm to any sensitive receptors and significant impacts on properties. If, during monitoring, you discover any breaches of the limits specified in your permit, we expect you to notify us as soon as the results have passed any laboratory quality assurance checks. We will provide you with further information on how to notify us in accordance with condition 4.3.1 and 2.

#### **Condition 4.3.5**

4.3.5 *Where the operator proposes to make a change in the management system or resources, which might have, or might reasonably be seen to have a significant impact on how compliance with the conditions of this permit is achieved:*

- (a) *the operator shall notify the Environment Agency at least 28 days before making that change, or where that is not possible, without delay; and*
- (b) *shall include in the notification a description of the proposed changes.*

You need to inform us and provide details if you are proposing to make changes to your management arrangements and the resources available where these might have, or might reasonably be seen to have, a significant impact on your ability to comply with your permit. Your change-management arrangements should contain provisions for considering the potential impact of changes on your ability to comply with the permit and identifying when you need to notify us under condition 4.3.5. You should normally inform us and provide a description of the proposed changes at least 28 days before making any changes. This condition also applies to notifying us about changes which may affect your radioactive waste management arrangements (see condition 1.1.1). There is guidance on when to notify us in chapter 6 of “The regulation of radioactive substances activities on nuclear licensed sites”.

### **Condition 4.3.6**

4.3.6 *If, in any week, the activity in any radioactive waste disposed of from any outlet or group of outlets specified in schedule 3 of any radionuclide or group of radionuclides exceeds, or is likely to exceed, the relevant Weekly Advisory Level (where specified), the operator shall:*

- (a) *without delay, inform the Environment Agency and the Food Standards Agency;*
- (b) *as soon as reasonably practicable, advise the Environment Agency and the Food Standards Agency of the circumstances at the site leading to the release and the possible impact of any deposition of radioactivity on pasture or crops in the vicinity of the site, including any measurements made.*

### **How to comply**

We include short-term advisory levels so that we and the Food Standards Agency will be informed of any short-term releases which have the potential, under particular combinations of weather conditions, time of year, etc, to give enhanced activity levels in foodstuffs such that dose limits or CFILs<sup>4</sup> may be exceeded. The notification will enable the Agencies to take early action if necessary. You need to have in place the management arrangements and monitoring to be able to inform us when disposals exceed or are likely to exceed any weekly advisory levels.

### **Condition 4.3.7**

4.3.7 *If, in any quarter, the activity in any waste discharged from any outlet or group of outlets specified in schedule 3 of any radionuclide or group of radionuclides exceeds the relevant Quarterly Notification Level (where specified), the operator shall provide the Environment Agency with a written submission which includes:*

- (a) *details of the occurrence;*
- (b) *a description of the means used to minimise the activity of radioactive waste discharged;*
- (c) *a review of those means having regard to conditions 2.3.1, 2.3.2 and 2.3.3;*

*not later than 14 days from making the record which demonstrates such excess.*

We may set quarterly notification levels to ensure we are alerted to operational anomalies that cause discharges to increase. We do this on a rolling quarterly period (that is the last full 3 months) You need to have in place the management arrangements and monitoring to be able to inform us when disposals exceed or are likely to exceed any quarterly notification levels. Where you notify us of an exceedance you must review your techniques against the requirements of conditions 2.3.1, 2.3.2 and 2.3.3 as appropriate.

### **Condition 4.3.8 (only tenants using open sources)**

4.3.8 *If the operator believes or has reasonable grounds for believing that an open radioactive source has been lost or stolen he shall:*

- (a) *without delay inform the Police and the Environment Agency;*
- (b) *make all reasonable efforts to recover the source;*
- (c) *as soon as is practicable report the circumstances in writing to the Environment Agency.*

See conditions 4.3.1 and 4.3.2 on how to make notifications to us.

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<sup>4</sup> Council food intervention level

## Annex A: Definition of BAT

BAT is defined as

*The use of the best available techniques shall emphasise the use of non-waste technology, if available.*

*The term "best available techniques" 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.*

*It therefore follows that what is "best available techniques" 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.*

*If the reduction of discharges and emissions resulting from the use of best available techniques does not lead to environmentally acceptable results, additional measures have to be applied.*

*"Techniques" include both the technology used and the way in which the installation is designed, built, maintained, operated and dismantled.*

## Annex B: burial conditions.

The majority of conditions for burial are the same as for disposal in general. This appendix covers only burial-specific conditions, which either replace standard conditions or are additional to those conditions. We have produced guidance on burial in [Near-surface Disposal Facilities on Land for Solid Radioactive Wastes](#) : the conditions below should be read in conjunction with the relevant parts of this guidance.

### Alternative condition 2.3.1

2.3.1 *The operator shall use the best available techniques in respect of the disposal of radioactive waste pursuant to this permit to dispose of radioactive waste at times, in a form, and in a manner so as to minimise the radiological effects on the environment and members of the public.*

This is a reduced version of the standard conditions 2.3.2 recognising that standard condition 2.3.1 does not apply where burial is the only form of disposal permitted. This condition serves the same purpose, that is to implement the optimisation (or ALARA) requirements in relation to burial. This condition is linked to condition 4.1.3 requiring the operator to retain a documented environmental safety case that sets out how condition 2.3.1, inter alia, will be delivered.

### Optional condition 2.3.6.

2.3.6 *The operator shall use appropriate measures such that the burial of radioactive waste on the premises shall not give rise to*

- (a) *pollution or hazards from pests;*
- (b) *noise and vibration at levels likely to cause pollution outside the premises;*
- (c) *odour at levels likely to cause pollution outside the premises.*

For sites that are landfills, these issues will be covered by the EPR landfill permit. So we will only apply this condition to a standalone RSR burial facilities (that is facilities not permitted as landfills) and only when relevant depending on the nature of the waste being disposed of and the nature and location of the site. The LF guidance on these issues will assist in identifying the measures to be taken, where this condition applies.

### Additional condition

3.1.x *The operator shall only dispose of solid radioactive waste by burial if:*

- (a) *all the relevant radioactive waste acceptance procedures have been completed and it fulfils the relevant radioactive waste acceptance criteria as defined in the environmental safety case;*
- (b) *it has not been diluted or mixed solely to meet condition 3.1.x(a) or any other condition of the permit;*

This condition restricts the disposal of radioactive wastes to those wastes which the operator has demonstrated can be safely disposed of in the facility – see next condition.

### **Additional condition**

4.1.x *The operator shall maintain a documented environmental safety case in relation to the burial of radioactive waste, which demonstrates*

(a) *the use of best available techniques to protect members of the public and the environment;*  
*and*

(b) *protection of members of the public and the environment from the non-radiological hazards of the radioactive waste;*

*throughout the life-cycle of the facility*

This condition requires the operator to maintain an environmental safety case, making the above high level demonstrations. Chapter 7 of the [Near-surface Disposal Facilities on Land for Solid Radioactive Wastes](#) provides detailed guidance on the content of an environmental safety case. As noted above this includes waste acceptance criteria identifying which wastes can be accepted and buried.

## Annex C: VLLW and schedule 3

This annex describes how nuclear sites can make use of the revised exemption provisions in relation to the disposal of solid “VLLW”. The relevant exemption provisions are defined in table 4 of the regulations (table 3.3 of the [Government Guidance](#)) as

Radioactive waste	Maximum concentration of radionuclides	Maximum quantity of waste to be disposed of per calendar year
Solid radioactive waste, with no single item > $4 \times 10^4$ Bq	$4 \times 10^5$ Bq for the sum of all radionuclides per $0.1\text{m}^3$	$2 \times 10^8$ Bq/year
Solid radioactive waste containing tritium and C-14 only, with no single item > $4 \times 10^5$ Bq	$4 \times 10^6$ Bq of tritium and C-14 per $0.1\text{m}^3$	$2 \times 10^9$ Bq/year

The disposal of low volumes of solid radioactive waste is described in paragraphs 3.80 to 3.98 of the Government Guidance. Although normally described as “low volume” waste it should be noted that disposal is in fact controlled by a combination of limits on concentration of activity and total activity, and not volume per se.

As stated in para 3.85 of the Government Guidance, nuclear operators can, in principle, make use of this exemption subject to the normal provisions, ie

- that all disposals of this type of waste from a site during that year can be made under the exemption. If the disposals of VLLW<sup>5</sup> exceed those limits then **all** such disposals need to be permitted<sup>6</sup>;
- subject to the wording of the permit on waste disposals;<sup>7</sup>
- in compliance with the provisions in the regulations for the disposal of VLLW.

These are standard approaches to the exemption provisions.

The new exemption provisions allow nuclear sites to dispose of solid VLLW, up to the limits specified in the regulations, with substantial quantities of non-radioactive waste for burial, incineration and recovery to sites not permitted under RSR, ie to conventional landfill, waste incinerators and waste treatment facilities. This is a change from the position we adopted in our guidance on “[disposing of radioactive waste to landfill](#)” following the publication of the 2007 LLW policy, where we required all VLLW from nuclear sites to be disposed of under the consignor’s permit and to sites permitted under RSR.<sup>8</sup>

Operators may therefore choose whether to

- dispose of VLLW under the exemption ;
- dispose of VLLW under the permit.

<sup>5</sup> For clarity the limits in table 3.3 refer to all solid VLLW disposed of, by all routes.

<sup>6</sup> This is the consequence of the wording of the regulations.

<sup>7</sup> Where an operator is permitted to dispose of a waste type, the operator cannot also dispose of that type of waste under an exemption.

<sup>8</sup> This is the consequence of treating all VLLW (including LV-VLLW) as HV-VLLW (page 4 of the guidance).

For clarity, you cannot do both. In the former, "VLLW" will **not** appear in the relevant table in schedule 3 and you can dispose of VLLW under the exemption provisions up to the limits and under the conditions specified in the regulations.

In the latter, VLLW will appear in your permit. You will not be able to dispose of VLLW under the exemption provisions and all VLLW must be disposed of under the permit and in accordance with its conditions.

If you hold a permit (or authorisation) issued before the changes to the legislation in 2011 you will need to apply to vary your permit if you wish to make use of the exemption. That is because the definition of LLW then used included VLLW and hence your permit authorises the disposal of VLLW (within the context of authorising disposals of LLW).

There is further general guidance on VLLW disposal at <http://publications.environment-agency.gov.uk/dispay.php?name=GEHO0911BUEJ-E-E>

## GLOSSARY AND ACRONYMS

Term	Meaning
Activity	A generic title for the practices or operations which require to be permitted (unless exempted from the need for a permit).
ALARA	As Low as Reasonably Achievable (economic and social factors being taken into account). Radiation doses comply with ALARA when they have been reduced to a level that represents a balance between dose and other factors (including economics). This is a statement of the optimisation principle.
BAT	Best Available Techniques - see annex A for full definition
BSSD	Basic Safety Standard Directive (96/29/EURATOM)
CEAR	Compilation of Environment Agency Requirements : the combined EARs (see below) for a permit
DECC	Department of Energy and Climate Change This is the Government Department with policy responsibility for Radioactive Substances Regulation in England and Wales.
Defra	Department for the Environment, Food and Rural Affairs This is the Government department with specific responsibilities for EPR.
EAR	Environment Agency Requirement: where permit conditions allow detailed requirements, approvals or agreements to be set out in a separate document (collectively the "CEAR").
EPR	Environmental Permitting Regulations : schedule 23 applies specifically to RSR
GRA	Guidance on Requirements for Authorisation Environment Agency guidance detailing the environmental objectives which an underground facility for the permanent disposal of radioactive waste must achieve. There are two versions of the GRA: one for geological disposal of higher activity radioactive waste; and one for near-surface disposal of lower activity radioactive waste.
GW	Groundwater (specifically in relation to a groundwater activity under schedule 22 of the regulations)
HA wastes	Higher Activity wastes as defined in the <a href="#">joint guidance on radioactive waste management</a>
LLW	Low Level Radioactive Waste
Licensee	An operator licensed under NIA65
NAIR	National Arrangements for Incidents involving Radioactivity
NIA65	The Nuclear Installations Act 1965
NII	Nuclear Installations Inspectorate now part of ONR
NLS	Nuclear Licensed Site: a site licensed under the Nuclear Installations Act 1965.
ONR	Office for Nuclear Regulation
Proximity principle	This 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.

<b>Term</b>	<b>Meaning</b>
Radsafe	See <a href="http://www.radsafe.org.uk/">http://www.radsafe.org.uk/</a>
Regulated facility (RF)	A collective term for the range of activities permitted under the Environmental Permitting Regulations
REP(s)	Radioactive Substances Regulation – Environmental Principles. Environment Agency guidance which sets out, at a high level, the principles which the Environment Agency applies to RSR.
RSA93	Radioactive Substances Act 1993, replaced in England and Wales by EPR2010 but still in force in Scotland and Northern Ireland
RSR	Radioactive Substances Regulation
RWA	Radioactive waste advisor: see the guidance on the SEPA website under “ <a href="#">Radioactive Waste advisors</a> ”.
RWMA	Radioactive Waste Management Arrangements: operators’ arrangements for the management of the generation and disposal of radioactive waste under an RSR permit.
Tenant	An operator on a nuclear licensed site but who is not a licensee.
VLLW	Very Low Level Radioactive Waste
Waste Hierarchy	A principle of waste management which requires that (in order of preference) wastes be: <ul style="list-style-type: none"> <li>• Avoided</li> <li>• Minimised</li> <li>• Reused</li> <li>• Recycled</li> <li>• Disposed of</li> </ul>