How to apply for an environmental permit

Form RSR-C5 – Variation to a bespoke radioactive substances activity permit (nuclear site, adding on-site disposal of solid radioactive waste)

Guidance notes

Read these guidance notes carefully before you fill in the form.

Complete Form RSR-C5 if you are the operator of a nuclear site and you want to apply to add in-situ disposal of radioactive waste or disposal of radioactive waste for a purpose to your permit. This application form is for disposal of solid radioactive waste that has been generated on your site, for example from decommissioning and clean-up of a nuclear site.

This application form should not be used for disposal of radioactive waste that is received on to the nuclear site solely for the purpose of disposal in a disposal facility. If your proposal involves a disposal facility then you should use Form RSR-B5.

We have published guidance on the management of radioactive waste on decommissioning nuclear sites at Decommissioning of nuclear sites and release from regulation - GOV.UK (www.gov.uk). We refer to this as the Guidance on Requirements for Release from regulation (GRR) for convenience. The terms "disposal facility", "disposal for a purpose" and "disposal in situ" are defined in the GRR.

If you want to make any other changes to your permit, not related to on-site disposal of solid radioactive waste to land, use Form RSR-C3.

Consult your Environment Agency regulator if you are not sure which form to use.

Guidance on our information requirements for form RSR-C5 is provided in sections 1 to 9 below; section numbers correspond to the section numbers on the form.

We will also expect you to submit a Waste Management Plan (WMP) and a Site-wide Environmental Safety Case (SWESC), or relevant extracts from them, to support your application. Further information on the WMP and SWESC is provided in section 10.

The GRR includes 5 principles and 15 requirements that we expect an operator to meet to allow us to permit a radioactive substances activity involving the in-situ disposal of radioactive waste or the disposal of radioactive waste for a purpose. We will apply this guidance in a way that is proportionate to the hazard presented by the waste. We include specific references to the GRR in the guidance below.

We strongly advise you to read the GRR and this guidance, and then to discuss your proposals with us before you make an application (see GRR Requirement R3).

Where you see the term 'document reference' on the form, give the document reference here and send the document with the application form when you've completed it. If you are making a joint submission to us and the Office for Nuclear Regulation (ONR), specify which part (for example, chapter and/or section number) of the submission is relevant to each question.

Contents

Terminology

'Directive waste' means waste as defined in the Waste Framework Directive (2009/98/EC) and implemented in English law through a number of statutory provisions. Directive waste includes the classes of inert, non-hazardous and hazardous waste. Directive waste is normally termed 'waste' but for clarity we use the term 'directive waste' here to avoid any confusion with 'radioactive waste'.

Radioactive waste is defined in schedule 23 of the Environmental Permitting Regulations 2016 (EPR 2016). Radioactive waste is excluded from the definition of 'directive waste' and is not subject to the provisions relating to directive waste.

1 About the permit being varied

State the permit number (as shown on the front of your current permit) that this application relates to.

2 Other applications

Tell us if you intend to make, or have recently made, an application for an environmental permit for another regulated facility on the same premises. For example, an application for a waste operation such as deposit for recovery, or a landfill installation. This will enable us to co-ordinate our determination work.

3 About your proposed changes

3a Type of variation

Information about types of variation and applicable charges can be found in Environmental permitting charges guidance - GOV.UK (www.gov.uk)

If you are applying for an administrative variation, give details of the changes you want in the box provided and then you do not need to answer any further questions on form RSR-C5. Go on to complete form RSR-F.

For all other variations, go to question 3b and complete the rest of the form.

3b Changes to disposal of radioactive waste activity

As a holder of a radioactive substances activity permit for a nuclear site, you will already be permitted for the activity 'disposal of radioactive waste on or from premises used for the purposes of an undertaking' specified in paragraph 11(2)(b) of Part 2 of Schedule 23 to the Regulations. This question asks you to specify the changes that you wish to make to the particular disposals of radioactive waste that are carried out under this activity description.

The types of disposals of solid radioactive waste that are described in Table 1 reflect the broad descriptions of on-site disposals, other than disposal facilities, that are included in the GRR. If you want to add one of these disposals that is not currently included on your permit, tick the relevant 'add activity' box in Table 1.

If you want to remove one of these disposals that is currently included on your permit (for example, when filling of a void with radioactive waste has been completed), tick the relevant 'delete activity' box. Note that this is not the same as surrendering your permit and the permit will continue to apply to the areas of the site where the activity was carried out until a surrender is applied for and granted.

If you are already undertaking the type of disposal described, but you want to add more of the same type of disposal, or change how you are carrying out the disposal, tick the relevant 'change activity' box in Table 1.

3c Provide a technical description of your on-site disposal of radioactive waste

Your description should include: (see note 1)

- A description of the disposal location(s) including:
  - the geology (superficial and solid)
  - hydrogeology and surface water hydrology (including distances to nearby surface water courses)
  - local environment, including human and wildlife receptors and information about pathways to them around the site, such as distances, land use, population size and density, groundwater/ aquifer use (including distance to nearest abstractions and use of abstractions), groundwater discharge to surface water courses, including whether any local areas or biota are protected or otherwise specially designated.
- The design of the proposed disposal including:
  - the technical features of any in-situ structure and the decontamination, sealing and other engineering works carried out on it prior to in-situ disposal
  - techniques for the containment of wastes, such as waste form and packaging (if appropriate), engineered or geological liner (or another barrier) type, and the thickness and permeability of the liner or barrier
  - techniques for leachate management
  - techniques for control of any emissions to air
  - techniques for the placement and covering of waste and type and performance of the cap
  - any other engineering or operational techniques employed to optimise the on-site disposal
- For co-disposal with directive waste, the proposed method of disposal (for example, containment in small localised areas or layering with directive waste) – if necessary, describe separately for different radioactive waste types.
- The expected timeframes over which disposal of radioactive waste may occur and the projected active lifetime of the proposed disposal (if different). A description should be provided of any past disposals of radioactive waste on-site and, to the extent known, anticipated future on-site disposals over the remaining lifetime of the nuclear site.

Note 1

If the proposed disposal has an EPR permit for the disposal or recovery of directive waste, or an application for such a permit has been made, you can make use of information supporting that application in response to question 3c. Provide a short description with a reference to the relevant application that contains the detailed information. You must ensure that all components of the radioactive waste disposal are fully described, including any structures being disposed of in-situ.

4 Operating techniques

4a Describe how you manage the on-site disposal of solid radioactive waste to protect the environment and to optimise the protection of members of the public

You should:

- describe your optimisation process (see note 2)
- identify and justify the techniques you are proposing as Best Available Techniques (BAT) (see notes 3 and 4)

Note 2

Principle 2 of the GRR states that: *The site shall be brought to a condition at which it can be released from radioactive substances regulation, through a process that will keep the radiological risks to individual members of the public and the population as a whole as low as reasonably achievable (ALARA) throughout the period of regulation and afterwards, as far as can be judged at the time when relevant actions are taken.*

We outline our expectations for the demonstration of optimisation in the context of on-site disposals on decommissioning nuclear sites under GRR Requirements R1 and R13. Requirement R1 concerns optimisation of the waste management options for a particular waste stream and demonstration that the disposal route proposed is the best option for that waste. Requirement R13 concerns optimisation of the design and implementation of an individual on-site disposal of radioactive waste.

We have also published general guidance on optimisation at RSR: Principles of optimisation - GOV.UK (www.gov.uk) Your Waste Management Plan (WMP), a requirement of your permit and the GRR, can help you to address this question.

Note 3

Best Available Techniques (BAT) in the context of on-site disposals of solid radioactive waste means the option that is identified as the outcome of the optimisation process undertaken to meet Requirements R1 and R13 in the GRR.

In justifying techniques as BAT you will need to ensure that the on-site waste disposals are optimised throughout the lifetime of the nuclear site, and at all times after surrender of the permit, to ensure that the radiological impacts of disposals on members of the public are ALARA and that GRR Requirements R9, R10, R11 and R12 are met. The use of BAT should also ensure that GRR Requirements R14 and R15 are met.

In order to demonstrate that the proposed disposal will meet the groundwater protection requirements of Schedule 22 to EPR 2016, you will also need to show how you will take all necessary and reasonable measures to prevent the input of radionuclides to groundwater. You must also demonstrate that the proposed disposal will not cause a direct discharge of pollutants to groundwater. The Government has published guidance in relation to groundwater activities at Environmental permitting guidance: Groundwater activities - GOV.UK (www.gov.uk). Further Environment Agency guidance about groundwater protection is available at Groundwater protection - GOV.UK (www.gov.uk). You can obtain further advice on the interface between regulation of groundwater activities and regulation of radioactive substances activities from your Environment Agency regulator.

Your response to question 4a must be based on the radioactive waste you propose to dispose of, as described in question 5 of this application.

Note 4

Management arrangements and systems for the on-site disposal of solid radioactive waste are covered in application form RSR-A. Our requirements for the demonstration of a suitable environmental safety culture and a management system, organisational structure and resources are described under GRR Requirement R5 and in RSR: Management arrangements for nuclear sites - GOV.UK (www.gov.uk)

4b Describe how you manage the on-site disposal of solid radioactive waste to protect members of the public and the environment from any non-radiological hazards of the radioactive waste

Optimisation, as defined under GRR Principle 2 and discussed in 4(a), only applies to radiological risks. However, adequate protection against non-radiological hazards needs to be maintained when optimising for radiological risks. Principle 3 of the GRR states that: *The site shall be brought to a condition at which it can be released from radioactive substances regulation, through a process that will provide protection to people and the environment against any non-radiological hazards associated with the radioactive substances, to a level consistent with that provided by the national standards applicable at the time when relevant actions are taken*.

You should explain how the proposed disposal provides a level of protection against the non-radioactive properties of the radioactive waste consistent with that delivered by current standards for directive waste. This does not mean that these standards need necessarily be applied but that a level of protection is achieved that is no less stringent than the level of protection that would be provided if these standards were applied. You must do this based on a defined range of the non-radiological properties of the waste, as described in question 5.

If you intend to make, or have recently made, an application for a directive waste disposal or recovery permit, you can utilise information, modelling and assessments that support that application to the extent that these represent the non-radioactive properties of the radioactive waste.

Our expectations concerning protection from the non-radiological hazards of radioactive waste are provided under GRR Requirement R15.

In order to demonstrate that the proposed disposal will meet the groundwater protection requirements of Schedule 22 to EPR 2016, you will also need to show how you will take all necessary and reasonable measures to:

- prevent the input of hazardous substances to groundwater, and
- limit the input of non-hazardous pollutants to groundwater to ensure that such inputs don't pollute groundwater.

You must also demonstrate that the proposed disposal will not cause a direct discharge of pollutants to groundwater. The Government has published guidance in relation to groundwater activities at Environmental permitting guidance: Groundwater activities - GOV.UK (www.gov.uk). Further Environment Agency guidance about groundwater protection is available at Groundwater protection - GOV.UK (www.gov.uk). You can obtain further advice on the interface between regulation of groundwater activities and regulation of radioactive substances activities from your Environment Agency regulator.

Where the disposal does not also have a EPR permit for a directive waste activity, some additional measures may be necessary to address issues such as odour, noise, and mud on roads.

In answering this question, you do not need to adopt the landfill classifications (inert, non-hazardous, hazardous) or meet other specific Landfill Directive provisions.

5 Disposal of radioactive waste

5a Provide a description and quantitative estimates of the radioactive waste to be disposed of on site

Describe the radioactive waste you are proposing to dispose of on site. Note that your description of the waste must be consistent with any statements made in response to question 9 of this application. Tell us:

- where on your site the waste will come from (see Note 5)
- its category (for example, Low Level Waste (LLW), High Volume Very Low Level Waste (HV-VLLW) etc)
- how much of it (mass or volume and radioactivity content) you will dispose of and over what period – you should specify the maximum amount (mass or volume and radioactivity content) you want to dispose of
- its nature and form (for example, packaged/bagged/loose; blocks/crushed etc)
- for structures being disposed of in situ, a description of the structure, its dimensions, location and degree of radioactive contamination etc
- if applicable, how you will treat or store it prior to disposal
- the radionuclides present in the wastes and the total activity (in becquerels) and activity concentrations of each radionuclide (or group of radionuclides) over the lifetime of the disposal. Where your figures relate to groups of radionuclides, a statement should be provided justifying the grouping as appropriate to use in the dose assessment
- which radionuclides are likely to contribute significantly to the outcome of the radiological impact assessment (these are likely to vary depending upon the pathway) (see section 7 for guidance about radiological assessments)
- the conventional properties of the radioactive waste (for example, its physical and chemical properties and any non-radiological hazards presented by the waste)
- any relevant limitations imposed by the conditions of an EPR permit for directive waste that applies to the same disposal.

Note 5

On-site disposal of radioactive waste by in-situ disposal or disposal for a purpose is for solid radioactive waste that arises from on-site operations such as decommissioning and clean-up of a nuclear site. You should describe how the waste will arise on site, for example building demolition or clean-up of contamination.

5b Provide your proposed limits for the disposal of radioactive waste

Your limits need to be consistent with the type, volume, properties and activity of the radioactive waste you are proposing to dispose of and the techniques described in question 4. Your proposals should be proportionate, simple and robust. If certain radionuclides dominate the assessed dose, you may consider proposing limits on those, together with a limit or limits on other groups of radionuclides.

6 Monitoring

6a Provide a description of the sampling arrangements, techniques and systems for measurement and assessment of discharges of radioactive and other substances from the disposal

Your description of your monitoring arrangements should:

- include details of your sampling arrangements, techniques and systems for the measurement and assessment of emissions of radioactivity and of non-radioactive substances from the disposal; for example, via leachate and gas, or via migration of contamination from in-situ structures
- include details of any sampling and monitoring of the performance of the disposal, for example, settlement, landfill gas, leachate levels (see note 6)

- demonstrate your proposals represent BAT for monitoring and are proportionate to the potential impact.

Note 6

If the proposed disposal has an EPR permit for the disposal or recovery of directive waste, or an application for such a permit has been made, you can make use of information supporting that application in response to question 6a. Provide a short description with a reference to the relevant application that contains the detailed information.

Reference should be made to GRR Requirement R8 for information about our expectations for monitoring.

6b Provide a description of your environmental monitoring programme

You should provide your proposed environmental monitoring programme for:

- establishing an environmental baseline before disposals start (or provide the results of this if a baseline has already been completed)
- the operational phase of the disposal
- the post-closure phase of the disposal

Your operational programme should take account of the guidance in Environmental radiological monitoring - GOV.UK (www.gov.uk)

You should also have regard to the guidance on monitoring of groundwater and leachate in Groundwater risk assessment for your environmental permit - GOV.UK (www.gov.uk) and Landfill developments: groundwater risk assessment for leachate - GOV.UK (www.gov.uk)

7 Radiological assessment

7a Provide a prospective dose assessment at the proposed limits for the disposal

For any application to dispose of solid radioactive waste on a nuclear site you need to provide a radiological assessment demonstrating that radiation exposure to members of the public around the site will be acceptable. The assessment should address all the key exposure situations likely to arise from disposal of radioactive waste. The assessment needs to consider the proposed disposal in combination with other disposals of gaseous, liquid and solid radioactive wastes made at the site, together with the contribution of any radioactive contamination in the ground or groundwater. This is done through the preparation of a Site-wide Environmental Safety Case (SWESC).

The GRR provides dose and risk criteria that need to be satisfied at the time of disposal and in the future. It divides the disposal lifetime into 'the period of radioactive substances regulation' (when the permit is in force) and 'after release from radioactive substances regulation' (after surrender of the permit). The radiological requirements for the protection of human health are specified in the GRR as follows:

- **During the period of radioactive substances regulation**: dose constraints apply as set out in GRR Requirement R9.
- **After release from radioactive substances regulation:** the following assessment criteria apply:
  - a risk guidance level as set out in GRR Requirement R10
  - a dose guidance level for inadvertent human intrusion as set out in GRR Requirement R11
  - a requirement to consider natural disruptive processes as set out in GRR Requirement R12

These radiological assessment criteria apply to exposures of people that may occur through the groundwater pathway, as well as through any other pathway. You can obtain further advice on how these criteria should be used to show that all necessary and reasonable measures have been taken to 'prevent' the input of radionuclides to groundwater from your Environment Agency regulator.

The radiological assessment must include radionuclide-specific doses or risks for the main/key radionuclides, and for scenarios that are likely to occur and those less likely to occur. You are strongly advised to discuss the scope of your radiological assessment with specialist radioactive waste assessors at the Environment Agency before submitting your application. We may identify in pre-application discussions additional scenarios that need to be included in the assessment.

We also expect you to assess the impacts associated with localised concentrations of radioactivity, for example, radioactive particles or discrete items that may in future be recognisable as unusual or not of natural origin and so could be a focus of curiosity or interest and potentially recovered, recycled or re-used by people. We expect you to demonstrate to our satisfaction that impacts associated with the disposal of such items are consistent with our dose and risk criteria and appropriate for on-site disposal.

For scenarios that are likely to result in the highest radiological impact we expect you to predict the environmental concentrations of radionuclides that give rise to these impacts. These may include predicted values of concentrations of radionuclides in: leachate on-site during the operational phase and in the post-closure phase; groundwater in the operational and in the post-closure phase; and the waste remaining on-site post-closure or, if it were disturbed, in environmental material (such as soil) containing waste from the site.

We expect the radiological assessment to be reported as follows:

- describe dose calculations and scenarios fully, in a transparent and coherent way which will allow us to review them and make them available for public consultation
- describe explicitly all relevant assumptions and the key parameters for the disposal location and the wastes
- present doses for each scenario by radionuclide and identify the limiting scenario
- identify the radionuclides that make the major contribution to doses and identify the waste streams in which they are present
- compare the results of the assessment with the relevant dose and risk criteria
- show how the proposed disposal contributes to the overall radiological impact of the site activities as set out in the SWESC

In your application, you should provide as a minimum the information relevant to the selected model used for the radiological assessment, and the information relevant to the assessments undertaken in relation to the non-radiological properties of the waste (see section 8).

7b Provide a prospective dose assessment for the most exposed members of the public in Member States of the European Union and/or Norway

This question refers to the Transboundary Radioactive Contamination (England) Direction 2020. Only respond to this question if:

- the activity you are applying for is specified in paragraph 2(j) of the Direction, “emplacement of radioactive waste above or under the ground without the intention of retrieval”, which includes waste being left in-situ; **and**
- you are applying to increase any of your current disposal limits or applying for a new disposal limit as part of this application; **and**
- the assessment completed in response to question 7a of this form indicates that:
    - the effective dose from the facility to a local representative person during the period of radioactive substances regulation (GRR Requirement R9) is ≥10 microSv per year, **or**
    - the assessed radiological risk to the local representative person after release from radioactive substances regulation (GRR Requirement R10) is ≥6 x 10^{-5} per year, **or**

- there are exceptional pathways of exposure to EU Member States and/or Norway either during or after the period of regulation, e.g. involving the export of foodstuffs.

Do not respond to this question if your application is for a military site or an activity that uses radioactive substances for military purposes.

If required, your assessment should include:

Airborne effluents

Models, including where appropriate generic models, and parameter values used to calculate the consequences of the releases in the vicinity of the plant and for other affected Member States and/or Norway:

- atmospheric dispersion of the effluents
- ground deposition and re-suspension
- food chains, inhalation, external exposure etc.
- living habits (diet, exposure time etc.)
- other parameter values used in the calculations

Evaluation of concentration and exposure levels associated with the envisaged discharge limits:

- annual average concentrations of activity in the atmosphere near the ground and surface contamination levels, for the most exposed areas in the vicinity of the plant and in affected EU Member States and/or Norway
- for the reference group(s) in the vicinity of the plant and in affected EU Member States and/or Norway, corresponding annual exposure levels: effective dose to adults, children and infants, taking account of all significant exposure pathways

Liquid effluents

Models, including where appropriate generic models, and parameter values used to calculate the consequences of the releases in the vicinity of the plant and for other affected EU Member States and/or Norway:

- aquatic dispersion of the effluents
- their transfer by sedimentation and ion exchange
- food chains, inhalation of sea spray, external exposure etc.
- living habits (diet, exposure time etc.)
- other parameter values used in the calculations

Evaluation of concentration and exposure levels associated with the envisaged discharge limits:

- annual average concentrations of activity in surface waters, at the points where such concentrations are highest, in the vicinity of the plant and in affected EU Member States and/or Norway
- for the reference group(s) in the vicinity of the plant and in affected EU Member States and/or Norway: effective dose to adults, children and infants, taking account of all significant exposure pathways

Radiological Impact During Post-Closure Period

- redundancy and performance of barriers (if relevant)
- time periods considered
- analysed features, events and processes, description of scenarios assumed (brief descriptions of the normal evolution scenario, most relevant degraded evolution scenarios and human intrusion scenarios)
- methods and techniques used for assessment of radiological impact

- parameters and assumptions
- main exposure pathways in vicinity of repository and other affected Member States and/or Norway resulting from normal evolution and for early degradation of barriers
- activity and timing of radionuclide release
- corresponding maximum exposure levels: effective doses and/or estimated risks to adults, children and infants living in the vicinity of the plant and in relevant areas of other affected Member States and/or Norway taking account of all significant exposure pathways
- evaluation of the uncertainties

7c Provide an assessment of the impact on the environment at the proposed limits for the disposal

You should demonstrate that the environment will be protected from the harmful effects of ionising radiation that may result from the potential release of radioactive substances from the disposal, both during the period of, and after release from, radioactive substances regulation (GRR Requirement R14).

You should assess the dose-rates to reference organisms that result from your proposed disposal of radioactive waste, including wildlife inhabiting ecosystems that are fed by groundwater. An appropriate range of reference organisms for freshwater, marine and terrestrial ecosystems is included in the ERICA tool (ERICA (erica-tool.com)). You should calculate worst-case dose-rates by assuming the presence of the reference organisms for the relevant ecosystem at the position of maximum environmental concentration.

We expect you to draw conclusions about the effects of the disposal on wildlife using the best available information at the time of the assessment. You should tell us which model you used to calculate these dose-rates and why it is appropriate, and set out all the data and assumptions (with reasoning) you used as input into the model, where not already covered in 7a. You should identify the designated wildlife sites (Natura 2000 sites) likely to be impacted by the disposal and explain your selection of the ERICA reference organisms and how they represent species of interest around the site.

There are currently no statutory criteria for determining radiological protection of the environment, though some criteria have been recommended by IAEA and ICRP. A number of research studies and regulatory guidance documents have proposed dose rate criteria and assessment approaches for particular species and habitats. Details can be found under Requirement R14 of the GRR.

The Environment Agency, Natural England and Natural Resources Wales have agreed a threshold of 40 µGy h^{-1} below which there would be no adverse effect to the integrity of a Natura 2000 site. The 40 µGy h^{-1} criterion is an action level relating to total impacts from all permitted discharges (aerial and liquid discharges) that may affect a Natura 2000 site. Where a Natura 2000 site(s) may be potentially affected, we will:

- assess the combined impact of emissions, from your and all other relevant permitted sites, on each potentially affected Natura 2000 site; and
- compare those combined impacts with the 40 µGy h^{-1} action level.

If the dose rates predicted to wildlife inhabiting a particular nature conservation site exceed 40 µGy h^{-1}, then we must consider possible action, which may include reducing regulatory limits, or carrying out further assessment to reduce conservatisms in assessments.

8 Non-radiological assessment

You should assess the non-radiological impact of the radioactive wastes being disposed of in line with our requirements described under GRR Requirement R15.

You may choose to use the various assessment tools set out in our directive waste regulation guidance to assess and justify the risk arising from the non-radiological properties of the radioactive waste. You may also use alternative approaches with appropriate justification. However, we expect assessment criteria and compliance points to be consistent with our expectations for a disposal of directive waste in order to meet groundwater protection requirements. You will find guidance on the tools and assessments for directive waste disposals at Risk assessments for your environmental permit - GOV.UK (www.gov.uk)

Your response must be based on the non-radiological properties of the radioactive waste you propose to dispose of, as described in question 5.

9 Radioactive waste pre-disposal arrangements

9a Provide details of your arrangements for pre-disposal verification of the waste to ensure control of the disposal of radioactive waste

On-site disposal of radioactive waste by in-situ disposal or disposal for a purpose is for solid radioactive waste that arises from on-site operations such as decommissioning and clean-up of a nuclear site. This question is about the controls that you exercise during the generation of the waste, its storage pending disposal and any handling or treatment of the waste prior to its disposal.

Describe the pre-disposal arrangements that are intended to ensure that radioactive waste is disposed of only where this is consistent with the proposed operating techniques (question 4), the associated description of the waste (question 5a) and the proposed limits (question 5b). Pre-disposal arrangements may include, but are not limited to:

- characterisation procedures
- requirements concerning the physical form of the waste, for example size, dimensions, blocks or crushed etc
- requirements concerning the chemical and biological characteristics of the waste
- quantitative or qualitative waste acceptance criteria or other criteria for emplacement
- procedures to confirm that any necessary pre-treatment of the waste has been undertaken
- procedures to ensure a criticality event cannot occur

The pre-disposal arrangements should be consistent with the SWESC. These arrangements must cover the radiological and the non-radiological properties of the radioactive waste. If the disposal is also permitted as a directive waste activity you must consider how these arrangements relate to the relevant waste acceptance criteria and procedures for the disposal of directive waste.

10 Waste Management Plan and Site-wide Environmental Safety Case

10a Provide relevant extracts from your WMP and SWESC to support your application

An application under EPR 2016 relating to the on-site disposal of solid radioactive waste should be supported by a Waste Management Plan (WMP) and a Site-wide Environmental safety Case (SWESC).

A WMP is a documented plan which provides a comprehensive description of the current intent for dealing with all radioactive substances on or adjacent to the site and demonstrates how waste management has been optimised.

A SWESC is a documented set of claims to demonstrate achievement by the site as a whole of the required standard of environmental safety. Where relevant, the SWESC includes the environmental safety case (ESC) for any on-site disposal facility. The SWESC also takes account of contributions to the combined impact on representative persons from adjacent nuclear sites, and from areas of contamination and previously permitted disposals outside the site.

Guidance on our expectations for a WMP and SWESC are provided under Requirements R2 and R7, together with sections 3 and 4, of the GRR. Information requirements are discussed in sections 1 to 9 above. You may only need to provide relevant extracts from your WMP and SWESC to support your application.

The WMP and SWESC should demonstrate a clear link between the optimisation of the on-site disposal (GRR Requirement R13), the results of the radiological and non-radiological assessment calculations, the radioactive waste pre-disposal arrangements and the permit limits applied for.