

**Environmental Protection Act 1990: Part IIA
Contaminated Land
The Radioactive Contaminated Land (Scotland)
Regulations 2007**

Statutory Guidance

November 2007
Paper SE/2007/168



Environmental Protection Act 1990: Part IIA Contaminated Land The Radioactive Contaminated Land (Scotland) Regulations 2007

Statutory Guidance

1. I am directed by the Scottish Ministers to issue this statutory guidance on the application of The Radioactive Contaminated Land (Scotland) Regulations 2007.

2. The detailed provisions of the Statutory Guidance are made under sections 78A(2), 78A(5), 78A(6) and 78BB(4) of Part IIA of the Environmental Protection Act 1990.

3. Section 78YA(1) of the Environmental Protection Act 1990 requires that before the Scottish Ministers can issue any guidance under Part IIA, they must consult the Scottish Environment Protection Agency and such other persons as they consider it appropriate to consult.

4. In addition, section 78YA requires the Scottish Ministers to lay a draft of any guidance they propose to issue under sections 78A(2), 78A(5), 78A(6) and 78BB(4) before the Scottish Parliament for 40 days. This guidance now issued was laid in draft before the Scottish Parliament on 16 November 2007.

Any queries on this guidance should be addressed to

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Introduction

1. In March 2007, the Scottish Ministers, in exercise of the powers conferred by sections 78(A)9 and 78YC of the Environmental Protection Act 1990 (EPA90) and of all the other powers enabling them in that behalf, laid before the Scottish Parliament The Radioactive Contaminated Land (Scotland) Regulations 2007 (SI 2007 No 179).

2. Those Regulation come into force, subject to Regulation 2, on 30th October 2007. Regulation 2 came into force on 1st April 2007 for the purpose of the exercise by the Scottish Ministers of powers conferred by Part IIA of the 1990 Act as modified by The Radioactive Contaminated Land (Scotland) Regulations 2007 to make regulations or orders, give directions or issue guidance.

3. Radioactivity was excluded, by Section 78YC of EPA90, from the provisions of the existing Part IIA regime. Extension of that Part IIA regime to include radioactivity delivers a long-standing policy commitment of the Scottish Ministers to complete the package for dealing with contaminated land.

4. The objectives for the radioactive contaminated land regime are broadly the same as those for the existing Part IIA regime. They include applying the principle that “the polluter pays” and the principle of sustainable development. The extension of the regime provides for access to and identification of land that may be contaminated by radioactivity. Where such land is causing lasting exposure of radiation to any person or where there is a significant possibility of such exposure, the regime will also allow for remediation, under circumstances where intervention is liable to be justified. The regime also ensures, therefore, the transparent implementation of the requirements of Articles 48 and 53 of Council Directive 96/29/Euratom of 13 May 1996, laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation. This Directive is subsequently referred to in this consultation document as the Basic Safety Standards Directive.

5. In February 2005, the Scottish Executive consulted on its proposals to extend the existing Part IIA regime to include radioactivity, Consultation on proposed amendments to Part IIA of the Environmental Protection Act 1990-Contaminated Land, SE paper 2005/2, February 2005. With one major exception, the proposals generally met with approval. The Executive proposed that, as the duty to identify and to appropriately remediate radioactively contaminated land was placed only on SEPA, then, in order to ensure a broadly consistent approach across Scotland, there was no need to issue detailed Statutory Guidance as had been done for the existing Part IIA regime. Thus, the Executive proposed that it would only issue high-level guidance, of the type included in its consultation paper. The provision of detailed guidance would be left to SEPA, and the manner and nature of such detailed prescription, for example, desk instructions to officers, would be provided by SEPA as part of its normal regulatory process. There was widespread criticism of this proposal, mainly on the basis that it could not be seen to be transparent. We have accepted this criticism and, in addition to the earlier high-level advice, upon which we consulted, Scottish Ministers are now providing this further detailed guidance.

6. The Regulations themselves have to be read in conjunction with the existing Part IIA regime, since they are not stand-alone Regulations but modifying Regulations. Similarly, this Statutory Guidance amends or adds to the existing Statutory Guidance and so needs to be read in conjunction with that existing Guidance, Environmental Protection Act 1990: Part IIA Contaminated Land Statutory Guidance: Edition 2, Paper SE/2006/44. May 2006. Where there is no need for change or addition, then the provisions of the existing guidance still apply, where appropriate, for the extension of the part IIA regime to include radioactivity. In that context, references to the duties of local authorities are replaced with references to the duties of SEPA. The specific parts of Paper SE/2006/44 that have been amended are as follows:

Section 1-4 and Section 18 of Annex 2, and

Chapters A and B of Annex 3

7. Section 78BA of The Radioactive Contaminated Land (Scotland) Regulations 2007 requires that, if at any time [whether or not in performing its functions under section 78B(1)] a local authority considers that any contaminated land in its area may be contaminated as a result of any radioactivity possessed by any substance, it shall give notice of that fact to SEPA. We are not including guidance in this document as to how that may be done. Rather, this will be left to SEPA to consider with local authorities in the exercise of their normal functions.

Purpose

8. This document provides detailed statutory guidance and other guidance to SEPA in carrying out its new duties resulting from the extension of the contaminated land regime to include radioactivity. The Statutory Guidance applies only to SEPA.

Application to nuclear sites

9. For the purposes of the radioactive contaminated land regime, it was intended that all land is covered by that regime with one exception that is that part of a site, owned or occupied by a nuclear site operator, for which a nuclear-site licence is in place. This is because there are sufficient regulatory controls already in place through the Nuclear Installations Inspectorate (NII) of the Health and Safety Executive (HSE) to require remediation there if necessary. Moreover, under the terms of the Memorandum of Understanding between HSE and SEPA, it is possible for SEPA to press for early remediation of contaminated land on the nuclear-licensed site that might cause contamination off that site. We believe that the HSE delicensing requirements are such that land on nuclear licensed sites that are subsequently delicensed will not require future remediation but the effect of the Regulations will be to allow for that, if necessary, after delicensing has taken place.

10. There was an issue with third party liability for contamination resulting from an incident at a civil nuclear site. This relates to the Paris and Brussels Conventions on third party liability in the field of nuclear energy, which establishes a legal framework for the provision of compensation to victims in the event of a civil nuclear incident. That and supplementary convention requirements are implemented in the UK through provisions of the Nuclear Installation Act 1965. Because nuclear liability is a reserved matter and other

concerns, the Scottish Regulations exempted, from the regime, contamination from or caused by a site in respect of which a nuclear site licence was in place. Regulations for such sites are to be made in the UK Parliament and will have the effect of bringing such contamination back into the Scottish regime for radioactive contamination of land.

Financial Implications

11. It is not possible at this stage to determine other than in general terms the likely extent of land liable to be designated as contaminated and the likely costs of any remediation that will be required. UK Government will be responsible under the Westminster Regulations for financial liability for incidents in Scotland arising from nuclear licensed sites.

12. The main immediate resource issue will be for the primary regulator, which is SEPA. Since there are no provisions for the time over which contaminated land issues are to be investigated, it will be possible for SEPA to prioritise its investigations and allocate resource requirements accordingly. Funding has already been given to SEPA for this purpose.

13. Under the Regulations, SEPA is to be the primary regulator. There is a duty on local authorities to notify SEPA in the event that they have information that would lead them to believe that land might be contaminated with radioactivity. Those who own or occupy land, designated for the purposes of the regime as being contaminated, or who may be liable for the costs of remediation, will also be affected.

14. There are no provisions for Crown Immunity to be applied to the regime. Land in respect of which a nuclear site licence is in force is not covered by the regime until such time as that nuclear site licence is given up. Land which is contaminated as a result of an activity on a nuclear licensed site will be brought back into the regime with the introduction of the Westminster Regulations, and this guidance applies to such land.

Regulatory Impact Assessment

15. A Regulatory Impact Assessment (RIA) on the extension of the Part IIA contaminated land regime was published with the consultation on the proposed changes to the regime. Copies are available from the address given at page 2 of this document.

ANNEX 1: Policy Regarding Radioactive Contaminated Land

Sustainable Development

Preventing new contamination

1 Radioactive contaminated land, like other types of contaminated land, is evidence of our failure in the past to move towards sustainable development. We must learn from that failure. The first priority of the Scottish Executive's policy on land contamination is therefore to prevent the creation of new contamination, primarily through the devolved controls within the regulatory regime of the Radioactive Substances Act 1993, as implemented by the Scottish Environment Protection Agency.

Interaction with other Regimes

2 There is a clear distinction between those dose limits to the public and to workers that are appropriate for intervention and those that are appropriate to future practices. Thus, even where, following investigation at a site, SEPA concludes that doses are such that a full range of remediation measures are not appropriate or justified, it could be that potential doses would warrant controls appropriate to a practice should there be future development at such a site. In those circumstances, SEPA should alert the relevant planning authority as to the result of its investigations and conclusions. The dose constraint appropriate to a practice is 0.3 mSv per annum.

ANNEX 2: A Description of the regime for Radioactive Contaminated Land

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Sections 5 – 17 of Annex 2 of Paper SE/2006/44 are applicable to radioactive contaminated land without amendment.

1 – Introduction

1.1 Part IIA of the Environmental Protection Act 1990 – which was inserted into that Act by section 57 of the Environment Act 1995 – provides a regulatory regime for the identification and remediation of contaminated land. In addition to the requirements contained in the primary legislation, operation of the regime is subject to the 2000 Regulations, the 2007 Regulations and statutory guidance.

1.2 Annex 2 of Paper SE/2006/44 (Environment Protection Act 1990: Part IIA Contaminated Land Statutory guidance: Edition 2) described, in general terms, the operation of the contaminated land regime, setting out the procedural steps the enforcing authority takes, and some of the factors which may underlie its decisions at each stage. This annex supplements that description by providing replacement sections of text that describe the radioactive contaminated land regime. This replacement text refers only to radioactive contaminated land; for other types of contaminated land the description remains unchanged. Where no alternative description for the radioactive contaminated land is presented the original description should be referred to.

Definitions

1.3 Throughout the text, various terms are used which have specific meanings under the primary legislation, or in the regulations or the statutory guidance. Where this is the case, the terms are printed in SMALL CAPITALS. The Glossary of Terms at Annex 4 to this paper either repeats these definitions or shows where they can be found.

1.4 Unless the contrary is shown, references in this document to “sections” are to sections of the Environmental Protection Act 1990 (as amended) and references to “regulations” are references to either the Contaminated Land (Scotland) Regulations 2000, the Contaminated Land (Scotland) Regulations 2005 or the Radioactive Contaminated Land (Scotland) Regulations 2007. References to the statutory guidance include the relevant Chapter in Annex 3 to this Circular and the specific paragraph (so that, for example, a reference to paragraph 13 of Chapter B is shown as “*paragraph B.13*”). Such references are to the most relevant paragraph(s): those paragraph(s) must, of course, be read in the context of the relevant guidance as a whole.

2 – The definition of contaminated land

2.1 Section 78A(2) defines CONTAMINATED LAND for the purposes of Part IIA as:-

“any land which appears to the LOCAL AUTHORITY in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

“(a) SIGNIFICANT HARM is being caused or there is a SIGNIFICANT POSSIBILITY of such harm being caused; or

“(b) SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT is being caused or there is a significant possibility of such pollution being caused”.

2.2 This definition reflects the role of the Part IIA regime, which is to enable the identification and remediation of land on which contamination is causing unacceptable risks to human health or the wider environment. It does not necessarily include all land where contamination is present, even though such contamination may be relevant in the context of other regimes. For example, contamination whilst not necessarily causing a significant level of risk in the context of new development of land may still be deemed a material planning consideration under the Town and Country Planning (Scotland) Act 1997.

2.3 The definition of contaminated land is the same for radioactive contaminated land as it is for other types of contaminated land. Therefore, paragraph 2.3 in Annex 2 of Paper SE/2006/44 which excludes harm or pollution attributable to radioactivity from this definition is no longer valid.

2.4 Although the definition of contaminated land has not been modified, the effect of the modifications made by the Radioactive Contaminated Land (Scotland) Regulations 2007 has been to create a different definition of contaminated land which applies specifically to radioactive contaminated land:

“any land which appears to SEPA to be in such a condition, by reason of substances in, on or under the land, that –

“(a) SIGNIFICANT HARM is being caused or there is a SIGNIFICANT POSSIBILITY of such harm being caused; or

“(b) SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT is being caused or there is a significant possibility of such pollution being caused”.

Where substance is defined in S78A(9) as:

“substance” means, whether in solid or liquid form or in the form of a gas or vapour, any substance which contains radionuclides that are or have been processed as part of a work activity or past practice, but shall not include radon gas and any radionuclide present as a result of the radioactive decay of radon;

Throughout this circular the term RADIOACTIVE CONTAMINATED LAND is used and refers to the definition given in 2.4

Significant Harm

2.5 The definition of CONTAMINATED LAND includes the notion of “SIGNIFICANT HARM and the “SIGNIFICANT POSSIBILITY” of such HARM being caused. When considering land that may be contaminated with radioactivity SEPA is required to act in accordance with statutory guidance issued by The Scottish Ministers in determining what is “significant” in either context (*section 78A(2) & (5)*). This statutory guidance is set out at Chapter A of Annex 3 to this circular.

2.6 The statutory guidance uses the concept of a “POLLUTANT LINKAGE” – that is, a linkage between a CONTAMINANT and a RECEPTOR, by means of a PATHWAY. The CONTAMINANT may be described as a POLLUTANT only when a PATHWAY and RECEPTOR are present. The statutory guidance then explains: (a) the types of RECEPTOR to which SIGNIFICANT HARM can be caused (HARM to any other type of RECEPTOR can never be regarded as SIGNIFICANT HARM); (b) the degree or nature of HARM to each of these RECEPTORS which constitutes SIGNIFICANT HARM (*Chapter A paragraph A.25 to A.30*); and (c) for each RECEPTOR, the degree of possibility of the SIGNIFICANT HARM being caused which will amount to a SIGNIFICANT POSSIBILITY (*Chapter A, paragraphs A.32 to A.38*).

2.7 Before SEPA can make the judgement that any land appears to be CONTAMINATED LAND on the basis that SIGNIFICANT HARM is being caused by radioactivity possessed by any substance, or that there is a SIGNIFICANT POSSIBILITY of such harm being caused by radioactivity possessed by any substance, SEPA must therefore identify a SIGNIFICANT POLLUTANT LINKAGE. This means that each of the following has to be identified:

- (a) a RADIOACTIVE CONTAMINANT;
- (b) a relevant RECEPTOR; and
- (c) a PATHWAY by means of which either:
 - (i) that RADIOACTIVE CONTAMINANT is causing SIGNIFICANT HARM to that RECEPTOR, or
 - (ii) there is a SIGNIFICANT POSSIBILITY of such harm being caused by that RADIOACTIVE CONTAMINANT to that RECEPTOR (*paragraphs A.13 and A.20*).

Pollution of The Water Environment

2.8 SEPA is also required to act in accordance with statutory guidance issued by THE SCOTTISH MINISTERS in determining whether significant POLLUTION OF THE WATER ENVIRONMENT is being caused or there is a significant possibility of such pollution being caused (*section 78A(5)*). This guidance is also set out at Chapter A of Annex 3 to this circular.

2.9 Before SEPA can make the judgement that any land appears to be RADIOACTIVE CONTAMINATED LAND on the basis that SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT is being caused or there is a SIGNIFICANT POSSIBILITY of such pollution being caused, the authority must identify a SIGNIFICANT POLLUTANT LINKAGE, where THE WATER ENVIRONMENT forms the RECEPTOR (*paragraphs A.13 and A.20*).

2.10 Guidance on what constitutes SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT, or the SIGNIFICANT POSSIBILITY of such pollution, is contained in paragraphs A.39 –A.46 of Annex 3 and paragraphs B.42 to B.44 of Annex 3.

3 – The Identification of contaminated land

Strategic approach to inspection of land

3.1 There is no requirement for local authorities to cause their areas to be inspected for the purpose of identifying RADIOACTIVE CONTAMINATED LAND. Similarly there is no requirement for SEPA to prepare a strategy that will cause all land to be inspected for the purpose of identifying RADIOACTIVE CONTAMINATED LAND. It is SEPA's responsibility to prioritise the inspection of land that it has REASONABLE GROUNDS to believe may be RADIOACTIVE CONTAMINATED LAND and to allocate resources accordingly.

Notifying SEPA that land is considered to be potentially radioactive contaminated land

3.2 Where a LOCAL AUTHORITY considers that land in its area may be RADIOACTIVE CONTAMINATED LAND it has a duty to give notice of that fact to SEPA. The authority may consider that land may be radioactively contaminated land as a result of:

- (a) its own gathering of information as part of its inspection strategy which has been developed to look for land contaminated as a result of substances that are not radioactive
- (b) receiving information or a complaint from a member of the public, business or a voluntary organisation.

3.3 Prior to giving notice to SEPA the authority should have due regard to the statutory guidance contained within paragraphs B.12 and B.13 which describes the circumstances where SEPA will have reasonable grounds to inspect land.

Inspecting Land

3.4 SEPA may identify a particular area of land where it is possible that a POLLUTANT LINKAGE involving a radioactive substance exists. SEPA could do so as a result of:

- (a) Information that it holds as part of fulfilling its other duties
- (b) receiving information from another regulatory body, such as a LOCAL AUTHORITY.
- (c) receiving information or a complaint from a member of the public, business or a voluntary organisation.

3.5 Where this is the case, SEPA needs to consider whether to carry out a detailed inspection to determine whether or not the land actually appears to be RADIOACTIVE CONTAMINATED LAND.

3.6 SEPA may already have detailed information concerning the condition of the land. This may have been provided, for example, by a LOCAL AUTHORITY or by a person such as the owner of the land. Alternatively, such a person may offer to provide such information within a reasonable and specified time. It may therefore be helpful for SEPA to consult the

owner of the land and other persons, in order to find out whether information already exists, or could be made available to the agency.

3.7 Where information is already available, or will become available, SEPA needs to consider whether the information provides, or would provide, a sufficient basis on which it can determine whether or not the land appears to be RADIOACTIVE CONTAMINATED LAND. If the information meets this test, SEPA does not need to carry out any further investigation of the land (*paragraph B.19*) and will proceed to make a determination on that basis (*see paragraph 3.25 below*).

3.8 Where SEPA does not have sufficient information, it needs to consider whether there are REASONABLE GROUNDS to make an inspection of the land including as a first step, the collation and assessment of documentary information or information from other bodies. SEPA may undertake an inspection only where there are REASONABLE GROUNDS for believing that land may be contaminated as a result of any radioactivity possessed by any substance. Statutory guidance on what constitutes reasonable grounds are contained within paragraphs B12 – B.13

3.9 If REASONABLE GROUNDS exist SEPA needs to carry out an inspection of the land. It has specific powers under Section 108 of the Environment Act 1995 to authorise suitable persons to carry out any such investigation. This can involve entering premises, taking samples or carrying out related activities for the purpose of enabling the authority to determine whether any land is RADIOACTIVE CONTAMINATED LAND. In some circumstances, the authorised person can also ask other persons questions, which they are obliged to answer, and make copies of written or electronic records.

3.10 If there is to be an inspection of the land, SEPA needs to consider whether it needs to carry out an intrusive investigation (for example, exploratory excavations) into the land. Under the statutory guidance, SEPA should carry out an intrusive investigation only where it considers that it is likely (rather than only “reasonably possible”) that a RADIOACTIVE CONTAMINANT and PATHWAY is actually present and that, given the current use of the land (as defined at *paragraph A.27*) a RECEPTOR is present or is likely to be present (*paragraph B.18*).

Special Sites

3.11 The modified Part IIA requires that RADIOACTIVE CONTAMINATED LAND is designated as a SPECIAL SITE. Unlike other types of contamination there is no requirement that land must be identified as contaminated land before designation as special site takes place. For RADIOACTIVE CONTAMINATED LAND identification and designation will occur simultaneously.

3.12 RADIOACTIVE CONTAMINATED LAND is always designated as a SPECIAL SITE therefore SEPA is the ENFORCING AUTHORITY for the purposes of the Part IIA regime.

Inspection using Statutory Powers of Entry

3.13 If the premises to be inspected are used for residential purposes, or if the inspection will necessitate taking heavy equipment onto the premises, the authorised person needs to give the occupier of the premises at least seven days notice of his proposed entry onto the premises. The authorised person can then enter the premises if he obtains either the consent

of the occupier or, if this is not forthcoming, a warrant issued by a sheriff (*section 108(6) and Schedule 18, Environment Act 1995*).

3.14 In other cases, consultation with the occupier prior to entry onto the premises may be identified and then incorporated into the inspection. In some instances, specific consents or regulatory permissions may be needed for access to, or work on, the site.

3.15 In an EMERGENCY, these powers of entry can be exercised forthwith if this is necessary (*section 108(6)*). For these purposes, a case is an EMERGENCY if it appears to the authorised person-

“(a) that there is an immediate risk of serious pollution of the environment or serious harm to human health, or

“(b) that circumstances exist which are likely to endanger life or health “and that immediate entry to any premises is necessary to verify the existence of that risk or those circumstances or to ascertain the cause of that risk or those circumstances or to effect a remedy” (*section 108(15), Environment Act 1995*).

3.16 Compensation may be payable by SEPA for any disturbance caused by an inspection using statutory powers of entry (*paragraph 6 of Schedule 18 of the Environment Act 1995*)

Objectives for the Inspection of Land

3.17 The primary objective in inspecting land is to enable SEPA to obtain the information needed to decide whether or not the land appears to be RADIOACTIVE CONTAMINATED LAND.

3.18 It is not necessary for SEPA to produce a complete characterisation of the nature and extent of all CONTAMINANTS, PATHWAYS and RECEPTORS on the land, or of other matters relating to the condition of the land. The identification of non-radioactive contaminants, pathways and receptors remain the responsibility of the LOCAL AUTHORITY.

3.19 Where it is practicable and appropriate to do so, SEPA and the LOCAL AUTHORITY shall undertake joint inspections in order to minimise the duplication of effort.

3.20 In some cases, the information obtained from an inspection may lead SEPA to the conclusion that, whilst the land does not appear to be RADIOACTIVE CONTAMINATED LAND on the basis of the information assessed it is still possible that the land is RADIOACTIVE CONTAMINATED LAND. In cases of this kind, SEPA will need to consider whether to carry out further inspections or pursue other lines of enquiry to enable it either to discount the possibility that the land is RADIOACTIVE CONTAMINATED LAND, or to conclude that the land does appear to be RADIOACTIVE CONTAMINATED LAND. In the absence of any such further inspection or enquiry SEPA will need to proceed to make its determination on the basis that it cannot be satisfied that the land falls within the statutory definition of RADIOACTIVE CONTAMINATED LAND.

3.21 In other cases, an inspection may yield insufficient information to enable SEPA to determine, in the manner described at paragraphs 3.22 to 3.27 below, whether or not the land appears to be RADIOACTIVE CONTAMINATED LAND. In such cases, SEPA will need to consider whether carrying out further inspections (for example, taking more samples) or pursuing other

lines of enquiry (for example, carrying out or commissioning more detailed scientific analysis of a substance or its properties) would be likely to provide the necessary information. If it is not possible to obtain the necessary information, SEPA will need to proceed to make its determination on the basis that it cannot be satisfied that the land falls within the statutory definition of RADIOACTIVE CONTAMINATED LAND.

Determining whether Land is Contaminated Land

3.22 Any determination by SEPA that particular land appears to be RADIOACTIVE CONTAMINATED LAND is made on one or more of the following bases, namely that:

- (a) SIGNIFICANT HARM is being caused;
- (b) there is a SIGNIFICANT POSSIBILITY of such harm being caused;
- (c) SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT is being caused; or
- (d) there is a SIGNIFICANT POSSIBILITY of such pollution being caused (*paragraph B.44*).

Consistency with Other Regulatory Bodies

3.23 If SEPA is considering whether the land might be RADIOACTIVE CONTAMINATED LAND by virtue of harm to non-human species (*paragraph A.29-A.30*), SEPA shall consult Scottish Natural Heritage (*paragraph B.35*)

Land on nuclear licensed sites

3.24 Land within a nuclear licensed site or within any part of a MoD site, which would have required a nuclear site licence had Crown Immunity not applied, is outwith the scope of this regime and cannot be RADIOACTIVE CONTAMINATED LAND.

Making the Determination / Designation

3.25 SEPA needs to carry out an appropriate, scientific and technical assessment of the circumstances of the land, using all of the relevant and available evidence. SEPA then determines whether any of the land appears to it to meet the definition of RADIOACTIVE CONTAMINATED LAND. Chapter B provides statutory guidance on the manner in which SEPA makes this determination (*Chapter B, Part 4*). This includes guidance on the physical extent of the land which should be covered by any single determination (*paragraphs B.25 to B.29*).

3.26 There may be cases where the presence of one or more RADIOACTIVE CONTAMINANTS are discovered on land which is undergoing, or is about to undergo, development. Where this occurs, SEPA will need to consider what action is appropriate under Part IIA and what action may be taken by the LOCAL AUTHORITY under town and country planning legislation (see Annex 1, paragraph 2).

3.27 SEPA needs to prepare a written record of any determination that land is RADIOACTIVE CONTAMINATED LAND, providing a summary of the basis on which the land has been identified as such land (*paragraph B.45*). This will include information on the specific SIGNIFICANT POLLUTANT LINKAGE, or linkages, found.

Information Arising from the Inspection of Land

3.28 As SEPA inspects land, it will generate information about the condition of that land.

3.29 Where land has been identified as being RADIOACTIVE CONTAMINATED LAND, and consequent action taken, SEPA has to include specified details about the condition of the land, and the REMEDIATION ACTIONS carried out on it, in its REGISTER (section 78R). Having this information on the REGISTER makes it readily available to the public and to those with an interest in the land.

3.30 But SEPA may also be asked, for example as part of a “local search” for a property purchase, to provide information about other areas of land which have not been identified as RADIOACTIVE CONTAMINATED LAND. This might include, for example, information on whether the authority had inspected the land and, if so, details of any site investigation reports prepared.

3.31 The Environmental Information Regulations 1992 (SI 1992/3240 as amended) may apply to any information about land contamination. This means that, depending on the circumstances and the particular information requested, SEPA may be obliged to provide the information when requested to do so. However, this is subject to the requirements in the 1992 Regulations relating to commercial confidentiality, national defence and public security.

3.32 Even where land has not been identified as RADIOACTIVE CONTAMINATED LAND, information collected under Part IIA may also be useful for the wider purpose of SEPA and other regulatory bodies, including:

- (a) planning and building control functions;
- (b) completion by Planning Authorities of the annual SVDLS returns; and
- (c) other relevant statutory pollution control regimes (for example, powers to dispose of radioactive waste that is unlikely to be lawfully disposed of).

4 – Identifying and Notifying Those Who May Need to Take Action

Notification of the Identification of Contaminated Land

Identification of Interested Persons

4.1 For any piece of land identified as being RADIOACTIVE CONTAMINATED LAND, SEPA needs to establish:

- (a) who is the OWNER of the land (*defined in section 78A(9)*);
- (b) who appears to be in occupation of all or part of the land; and
- (c) who appears to be an APPROPRIATE PERSON to bear responsibility for any REMEDIATION ACTION which might be necessary (*defined in section 78F*; see paragraphs 9.3 to 9.20 of Circular SE/2006/44).

4.2 At this early stage, SEPA may not be able to establish with certainty who falls into each of these categories, particularly the last of them. As it obtains further information, the agency needs to reconsider these questions. It needs to act, however, on the basis of the best information available to it at any particular time.

The Notification

4.3 SEPA needs to notify, in writing, the persons set out in paragraph 4.1 above, as well as the relevant LOCAL AUTHORITY, of the fact that the land has been identified as being RADIOACTIVE CONTAMINATED LAND (section 78BC(1)). The notice given to any of these persons will inform them of the capacity - for example, OWNER or APPROPRIATE PERSON - in which they have been sent it.

4.4 SEPA may, at any subsequent time, identify some other person who appears to be an APPROPRIATE PERSON, either as well as or instead of those previously identified. Where this happens, SEPA needs to notify that person that he appears to be an APPROPRIATE PERSON with respect to land which has been identified as RADIOACTIVE CONTAMINATED LAND (section 78BC(2)) and include that person in the process of consultation on what REMEDIATION might be appropriate. SEPA may therefore wish to consider whether to provide any additional information to the recipients of the notification, in order to facilitate this consultation. The following categories of information may be useful for these purposes:

- (a) a copy of the written record of the determination made by SEPA that the land appears to be RADIOACTIVE CONTAMINATED LAND (*paragraph B.45*);
- (b) information on the availability of site investigation reports, with copies of the full reports being available on request;
- (c) an indication of the reason why particular persons appear to SEPA to be APPROPRIATE PERSONS; and

(d) the names and addresses of other persons notified at the same time or previously, indicating the capacity in which they were notified (e.g. as OWNER or as APPROPRIATE PERSON).

18. – Procedures Relating to Special Sites – replaced

- 18.1 Any RADIOACTIVE CONTAMINATED LAND will be de designated as a special site at the same time as it is identified by SEPA. There is no requirement for SEPA to request the advice of LOCAL AUTHORITY or any other stakeholder regarding designation of such sites.
- 18.2 There is no provision in the regulations to refer special site decisions relating to radioactive contaminated land to THE SCOTTISH MINISTERS.

ANNEX 3: Statutory Guidance

Contents of this Annex

Chapter A – Definition of Radioactive Contaminated Land

Chapter B – The Identification of Radioactive Contaminated land

Chapter C, D and E of Circular SE/2006/44 are applicable to radioactive contaminated land without amendment.

CHAPTER A: Statutory Guidance on the Definition of Radioactive Contaminated Land

Part 1 – Scope of the Chapter

Part 2 – Definitions of Terms and General Material

Part 3 – Significant Harm and the Significant Possibility of Significant Harm

Part 4 – Significant Pollution and the Significant Possibility of Significant Pollution of the Water Environment

PART 1

Scope of the Chapter

- A.1 The statutory guidance in this Chapter is issued under section 78A(2), (5) and (6) of Part IIA of the Environmental Protection Act 1990 and provides guidance on applying the definition of contaminated land in the cases where radioactive contamination is involved.
- A.2 “Contaminated land” is defined at section 78A(2) as:
“any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

“(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

“(b) significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused;”
- A.3 Section 78A(5) further provides that:
“the questions –

(a) what harm or pollution of the water environment is to be regarded as “significant”;

(b) whether the possibility of significant harm or of significant pollution of the water environment being caused is “significant”;

shall be determined in accordance with guidance issued by the Scottish Ministers”.
- A.4 Section 78BB places the duty for identifying land that may be contaminated land as a result of radioactivity possessed by any substance (i.e. RADIOACTIVE CONTAMINATED LAND) on SEPA.
- A.5 As well as placing a duty on SEPA to identify RADIOACTIVE CONTAMINATED LAND, Section 78BB(4) further provides that

“ in performing its duties [to identify radioactive contaminated land], the appropriate Agency [SEPA] shall act in accordance with guidance issued by the Scottish Ministers...”
- A.6 In determining the questions above and consequently whether land is RADIOACTIVE CONTAMINATED LAND SEPA is therefore required to act in accordance with the guidance contained in this Chapter.
- A.7 Guidance on the manner in which that determination is to be made is set out in Part 4 of the statutory guidance in Chapter B.

PART 2

Definitions of Terms and General Material

- A.8 Unless otherwise stated, any word, term or phrase given a specific meaning in Part IIA of the Environmental Protection Act 1990 has the same meaning for the purposes of the guidance in this Chapter.
- A.9 Any reference to “Part IIA” means “Part IIA of the Environmental Protection Act 1990”. Any reference to a “section” in primary legislation means a section of the Environmental Protection Act 1990, unless it is specifically stated otherwise.

Risk Assessment

- A.10 The definition of contaminated land is based upon the principles of risk assessment. For the purposes of this guidance, “risk” is defined as the combination of:
- (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
 - (b) the magnitude (including the seriousness) of the consequences.
- A.11 The guidance below follows established approaches to risk assessment, including the concept of contaminant-pathway-receptor. (In the technical literature, this is sometimes referred to as source-pathway-target.)
- A.12 There are two steps in applying the definition of contaminated land.

STEP ONE

- A.13 The first step is for SEPA to satisfy itself that a “radioactive contaminant”, a “pathway” (or pathways), and a “receptor” have been identified with respect to that land. These three concepts are defined for the purposes of this Chapter in paragraphs A.14 to A.16 below.
- A.14 A radioactive contaminant is a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of the water environment.
- A.15 A receptor is either:
- (a) a living organism, a group of living organisms, an ecological system which;
 - (i) is in a category listed in A.25 as a type of receptor, and
 - (ii) is being, or could be, harmed, by a radioactive contaminant; or
 - (b) a water environment which is being, or could be, polluted by a radioactive contaminant.
- A.16 A pathway is one or more routes or means by, or through, which a receptor:

- (a) is being exposed to, or affected by, a radioactive contaminant, or
- (b) could be so exposed or affected.

- A.17 It is possible for a pathway to be identified for this purpose on the basis of a reasonable assessment of the general scientific knowledge about the nature of a particular contaminant and of the circumstances of the land in question. Direct observation of the pathway is not necessary.
- A.18 The identification of each of these three elements is linked to the identification of the others. A pathway can only be identified if it is capable of exposing an identified receptor to an identified radioactive contaminant. That particular radioactive contaminant should likewise be capable of harming or, in the case of the water environment, be capable of polluting that particular receptor.
- A.19 In this Chapter, a “pollutant linkage” means the relationship between a radioactive contaminant, a pathway and a receptor, and a “pollutant” means the radioactive contaminant in a pollutant linkage. Unless all three elements of a pollutant linkage are identified in respect of a piece of land, that land should not be identified as contaminated land. There may be more than one pollutant linkage on any given piece of land.
- A.20 All radioactive substances emit ionising radiation, therefore for the purposes of determining whether a pollutant linkage exists (and for describing any such linkage), SEPA may treat two or more substances as being a single substance.

STEP TWO

- A.21 The second step in applying the definition of contaminated land is for SEPA to satisfy itself that both:
- (a) such a pollutant linkage exists in respect of a piece of land; and
 - (b) that the pollutant linkage:
 - (i) is resulting in significant harm being caused to the receptor in the pollutant linkage,
 - (ii) presents a significant possibility of significant harm being caused to that receptor,
 - (iii) is resulting in the significant pollution of the water environment which constitutes the receptor, or
 - (iv) is likely to result in a significant possibility of such pollution being caused.

- A.22 In this Chapter, a “significant pollutant linkage” means a pollutant linkage which forms the basis for a determination that a piece of land is contaminated land. A “significant pollutant” is a pollutant in a “significant pollutant linkage”.
- A.23 The guidance in Part 3 below relates to questions about significant harm and the significant possibility of such harm being caused. The guidance in Part 4 below relates to the significant pollution of the water environment and the significant possibility of such pollution being caused.

PART 3

Significant Harm and the Significant Possibility of Significant Harm

A.24 [the modified] Section 78A(4) defines “harm” as meaning “lasting exposure to any human being resulting from the after-effects of a radiological emergency, past practice or work activity”. Section 78A(5) provides that what harm is to be regarded as “significant” and whether the possibility of significant harm being caused is significant shall be determined in accordance with this guidance.

What Harm is to be Regarded as “Significant?”

A.25 SEPA should regard as significant only harm which is to a receptor of one of the following types:

- (a) human beings
- (b) non-human species
- (c) the water environment

and which meets the description of significant harm for the given receptor as specified in this guidance.

A.26 SEPA should disregard any receptors which are not likely to be present, given the ‘current use’ of the land or other land which might be affected.

A.27 For the purposes of this guidance, the “current use” means any use which is currently being made, or is likely to be made, of the land and which is consistent with any existing planning permission (or is otherwise lawful under town and country planning legislation). This definition is subject to the following qualifications:

(a) the current use should be taken to include any temporary use, permitted under town and country planning legislation, to which the land is, or is likely to be, put from time to time;

(b) the current use includes future uses or developments which do not require a new, or amended, grant of planning permission (but see also paragraph A.38 below);

(c) the current use should, nevertheless, be taken to include any likely informal recreational use of the land, whether authorised by the owners or occupiers or not, (for example, children playing on the land); however, in assessing the likelihood of any such informal use, the local authority should give due attention to measures taken to prevent or restrict access to the land; and

(d) in the case of agricultural land, however, the current agricultural use should not be taken to extend beyond the growing or rearing of the crops or animals which are habitually grown or reared on the land.

Significant harm to human beings

- A.28 SEPA should regard significant harm as being caused to human beings when lasting exposure gives rise to an individual dose exceeding one or more of the following:
- (a) An effective dose of 3 millisieverts per annum;
 - (b) An equivalent dose to the lens of the eye of 15 millisieverts per annum;
 - (c) An equivalent dose to the skin of 50 millisieverts per annum.

Significant harm to non-human species

- A.29 SEPA should regard significant harm as being caused to non-human species when lasting exposure gives rise to dose rates that exceed one or more of the following:
- (a) $40 \mu\text{Gy hr}^{-1}$ to terrestrial biota or plants;
 - (b) $400 \mu\text{Gy hr}^{-1}$ to aquatic biota or plants;
- A.30 In assessing doses to non-human species SEPA will take account of the most up-to-date methodology

Background radiation

- A.31 When assessing doses arising from lasting exposure no account shall be taken of the natural level of background ionising radiation, i.e. to radionuclides contained in the human body, to cosmic radiation or to radionuclides present in the undisturbed earth's crust.

Whether the possibility of significant harm being caused is significant?

- A. 32 In cases of lasting exposure when radiation exposure is not certain to occur the probability of radiation dose being received needs to be taken into account. In the following paragraphs "potential annual equivalent dose" and "potential annual effective dose" are doses that are not certain to occur.

- A. 33 Where:

- (a) the potential total effective dose is less than 3 mSv; and
- (b) the potential equivalent dose to the lens of the eye is less than 15 mSv; and
- (c) the potential equivalent dose is less than 50 mSv

SEPA should **not** regard the possibility of significant harm as significant, irrespective of the probability of radiation dose being received.

- A. 34 Where:

- (a) the potential total effective dose is greater than 100 mSv; or
- (b) contact with contamination would result in a dose to the skin greater than 10 Gy in 1 hour;

SEPA shall regard the possibility of significant harm as significant, irrespective of the probability of radiation dose being received.

A. 35 If the conditions in A.33 and A.34 are not met, the probability of radiation dose being received needs to be taken into account. SEPA shall regard the possibility of significant harm as significant where:

- (a) the potential total effective dose multiplied by the probability of exposure is greater than 3 mSv; or
- (b) the potential equivalent dose to the lens of the eye multiplied by the probability of exposure is greater than 15 mSv; or
- (c) the potential equivalent dose to the skin multiplied by the probability of exposure is greater than 50 mSv.

A. 36 The possibility of significant harm being caused as a result of any changes of use of any land to one which is not a “current use” of that land (as defined in paragraph A.27 above) should not be regarded as a significant possibility of significant harm.

A.37 When considering the possibility of significant harm being caused in relation to any future use or development which falls within the description of a “current use” as a result of paragraph A.27 (b) above, SEPA should assume that if the future use is introduced, or the development carried out, this will be done in accordance with any existing planning permission for that use or development. In particular, SEPA should assume:

- (a) that any remediation which is the subject of a condition attached to that planning permission, or is the subject of any planning obligation, will be carried out in accordance with that permission or obligation; and
- (b) where a planning permission has been given subject to conditions which require steps to be taken to prevent problems which might be caused by contamination, and those steps are to be approved by the planning authority, that the planning authority will ensure that those steps include adequate remediation.

Whether the possibility of significant harm being caused to non-human species is significant?

A.38 SEPA should regard the possibility of significant harm being caused to non-human species as significant when significant harm defined in A.29 is likely to be caused. For this

purpose SEPA should regard something as being “likely” when on the balance of probabilities it is judged more likely than not to be caused.

PART 4

Significant Pollution and the Significant Possibility of Significant Pollution of the Water Environment

- A.39 Section 78A(9) defines pollution of the water environment in terms of the direct or indirect introduction into the water environment of substances which **may** give rise to harm to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems, result in damage to material property or impair or interfere with amenities and other legitimate uses of the water environment.
- A.40 Section 78A(2) provides that land is to be considered contaminated land for the purposes of Part IIA only in cases where pollution resulting therefrom is significant or where there is a "significant" possibility of significant pollution or harm occurring.
- A.41 Section 78A(5) provides that what pollution is to be regarded as significant and whether the possibility of significant pollution being caused is significant shall be determined in accordance with this guidance.
- A.42 Section 78A(2) requires that if significant pollution of the water environment results in significant harm or a significant possibility of significant harm, the land should be identified as contaminated.
- A.43 Before determining that significant pollution of the water environment is being, or is likely to be, caused, SEPA should be satisfied that a substance is continuing to enter, or is likely to enter, the water environment. For this purpose, SEPA should regard something as being "likely" when it is judged more likely than not to occur. The term "continuing to enter" should be taken to mean any entry additional to that which has already occurred.
- A.44 Land should not be designated as contaminated where:
- (a) a substance is already present in the water environment; and
 - (b) entry of that substance from land into the water environment has ceased;
and
 - (c) it is not likely that further entry will take place.
- A.45 If a substance is present in a source material which is immiscible with water, entry means actual dissolution of the substance from the material into the water environment.

What Pollution Is to Be Regarded As “Significant”?

- A.46 SEPA should regard pollution of the water environment as significant where the after effects of a radiological emergency, past practice or past work activity gives rise to concentrations of radionuclides in water that if a receptor was present would result in harm to man or to non-human species.

CHAPTER B: Statutory Guidance on the Identification of Radioactive Contaminated Land

Part 1 – Scope of the Chapter

Part 2 – Definitions of Terms and General Material

Part 3 – Inspection of Land for the Purposes of Identifying Radioactive Contaminated Land

Part 4 – Determining whether Land Appears to be Radioactive Contaminated Land

Part 1

Scope of the Chapter

- B.1 The statutory guidance in this Chapter is issued under section 78BB(4) of Part IIA of the Environmental Protection Act 1990, and provides guidance on the inspection of land by SEPA and the manner in which SEPA is to determine whether any land appears to it to be radioactive contaminated land.
- B.2 Section 78BB(1) provides that “Where the appropriate Agency considers that there are reasonable grounds for believing that land may be contaminated land as a result of any radioactivity possessed by any substance, it shall inspect that land for the purposes of identifying whether it is so contaminated and requires designation as a special site...”
- B.3 Section 78BB(4) further provides that “In performing it’s... [inspection duties], the appropriate Agency shall act in accordance with any guidance issued for the purpose in accordance with section 78YA below.”
- B.4 SEPA is therefore required to act in accordance with the guidance contained within this chapter.
- B.5 The questions of what harm is to be regarded as significant, whether the possibility of significant harm being caused is significant, what level of pollution of the water environment is to be regarded as significant and whether the possibility of such pollution being caused is significant are to be determined in accordance with guidance contained in Chapter A.

Part 2

Definitions of Terms

- B.6 Unless otherwise stated, any word, term or phrase given a specific meaning in Part IIA of the Environmental Protection Act 1990, or in the guidance at Chapter A, has the same meaning for the purposes of the guidance in this Chapter.
- B.7 Any reference to “Part IIA” means “Part IIA of the Environmental Protection Act 1990”. Any reference to a “section” in primary legislation means a section of the Environmental Protection Act 1990, unless it is specifically stated otherwise.

PART 3

Inspection of land for the purposes of identifying radioactive contaminated land

Duty of LA to advise SEPA that land may be radioactive contaminated land

- B. 8 S78BA provides that “where a local authority considers that any contaminated land in its area may be contaminated as a result of any radioactivity possessed by any substance, it shall give notice of that fact to the appropriate agency [SEPA]”
- B.9 This duty imposed by S78BA is not limited to land that has been statutorily identified as *contaminated land* under S78B.

Procedure adopted by SEPA when notified under S78BA

- B. 10 Upon receipt of any notice under issued under S78BA SEPA will assess the information received and will advise the informing local authority of the following:
- (a) its decision regarding whether or not it has reasonable grounds for inspection; and
 - (b) the reasons for that decision; and
 - (c) any future actions it plans to take
- B.11 If reasonable grounds exist and the land is inspected, the outcome of the inspection will be notified to the local authority as required by S78BB(3)

Reasonable grounds for inspection

- B.12 SEPA will have reasonable grounds for inspection where;
- (a) A substance arising from a past practice, past work activity, or radiological emergency has been identified as present on the land; and
 - (b) Receptors have been identified on that land; and
 - (c) It is SEPA’s opinion that it is possible that the identified contamination may cause lasting exposure giving rise to radiation doses exceeding those set out in Part A of this guidance.
- B.13 Former historical land uses may be evidence that lasting exposure can give rise to doses exceeding those set out in Part A of this guidance but the fact that land had a particular historical land use does not in itself give rise to reasonable grounds for inspection.

Inspecting Particular areas of land

- B. 14 Where SEPA is satisfied that reasonable grounds exist it should carry out a detailed inspection of any such area to obtain sufficient information to determine in accordance with the guidance on the manner of determination in Part 4 below whether the land appears to be radioactive contaminated land.
- B. 15 To be sufficient for this purpose the information should include, in particular, evidence of the actual presence of one or more radioactive contaminants and receptors. Such evidence may confirm the information that formed the basis of reasonable grounds or may be evidence of new receptors and radioactive contaminants.
- B. 16 Detailed inspection may include any or all of the following:
- (a) the collation and assessment of documentary information, or other information from other bodies;
 - (b) a visit to the particular area for the purposes of visual inspection and, in some cases, limited sampling (for example of surface deposits); or
 - (c) intrusive investigation of the land (for example by exploratory excavations).
- B.17 Section 108 of the Environment Act 1995 gives SEPA the power to authorise a person to exercise specific powers of entry. For the purposes of this Chapter, any detailed inspection of land carried out through use of this power by SEPA is referred to as an “inspection using statutory powers of entry”
- B.18 SEPA should only carry out an inspection using statutory powers of entry, if it has reasonable grounds to believe that land may be radioactive contaminated land as defined in B.12.
- B.19 SEPA should not carry out any inspection using statutory powers of entry which takes the form of intrusive investigation if:
- (a) it has already been provided with detailed information on the condition of the land, which provides an appropriate basis upon which SEPA can determine whether the land is contaminated land in accordance with the requirements of the guidance in this Chapter; or
 - (b) a person offers to provide such information within a reasonable and specified time, and then provides such information within that time.
- B.20 SEPA should carry out any intrusive investigation in accordance with appropriate technical procedures for such investigations. It should also ensure that it takes all reasonable precautions to avoid harm, or pollution of the water environment or damage to natural resources or features of historical or archaeological interest which might be caused as a result of its investigation. Before carrying out any intrusive investigation on any area notified as an area of special scientific interest (SSSI),

SEPA should consult Scottish Natural Heritage on any action which, if carried out by the owner or occupier, would require the consent of Scottish Natural Heritage under section 28 of the Wildlife and Countryside Act 1981.

- B.21 If at any stage, SEPA considers, on the basis of information obtained from a detailed inspection, that there is no longer a reasonable possibility that a particular pollutant linkage exists on the land, SEPA should not carry out any further detailed inspection for that pollutant linkage.

Non-radioactive pollutant linkages and Delegation of inspection powers

- B.22 If land has been determined to be radioactive contaminated land and the presence of non-radioactive pollutant linkages has been identified it is possible that a Local Authority would become the enforcing authority for the non-radioactive pollutant linkages in the future. It is therefore helpful for the relevant local authority to have an informal role at the inspection stage for any such land.

- B.23 In some limited circumstances a Local Authority may agree after discussion with SEPA, that it is appropriate for the Local Authority to carry out the inspection on behalf of SEPA. In such cases SEPA would remain responsible for any costs incurred by the Local Authority. Where the Local Authority is to carry out an inspection on behalf of SEPA, SEPA should authorise such persons as necessary to exercise the powers of entry conferred by section 108 of the Environment Act 1995. Before SEPA gives such an authorisation, it should ensure that the conditions for the use of the statutory powers of entry set out in paragraph B.18 above are met.

PART 4

Determining whether Land Appears to be Contaminated Land

B.24 SEPA has the sole responsibility for determining whether any land appears to be radioactive contaminated land. It cannot delegate this responsibility, although in discharging it SEPA can choose to rely on information or advice provided by another body such as local authorities or by a consultant appointed for that purpose. This applies even where a local authority has carried out the inspection of land on behalf of SEPA (see paragraph B.23 above).

Physical Extent of Land

B.25 A determination that land is radioactive contaminated land is necessarily made in respect of a specific area of land. In deciding what that area should be, the primary consideration is the extent of the land which is radioactive contaminated land. However, there may be situations in which SEPA may consider that separate designations of parts of a larger area of radioactive contaminated land may simplify the administration of the consequential actions. In such circumstances, SEPA should do so, taking into account:-

(a) the location of significant pollutants in, on or under the land;

(b) the nature of the remediation which might be required; and

(c) the likely identity of those who may be the appropriate persons to bear responsibility for the remediation (where this is reasonably clear at this stage).

B.26 If necessary, SEPA should initially review a wider area, the history of which suggests that contamination problems are likely. It can subsequently refine this down to the precise areas which meet the statutory tests for identification as contaminated land, and use these as the basis for its determination.

B.27 In practice, the land to be covered by a single determination is likely to be the smallest area which is covered by a single remediation action which cannot sensibly be broken down into smaller actions. Subject to this, the land is likely to be the smaller of:-

(a) the plots which are separately recorded in *the Land Register* or are in separate ownership or occupation; and

(b) the area of land in which the presence of significant pollutants has been established.

B.28 The determination should identify the area of radioactive contaminated land clearly, including reference to a map or plan at an appropriate scale.

B.29 SEPA should also be prepared to review the decision on the physical extent of the land to be identified in the light of further information.

Making the Determination

- B.30 In determining whether any land appears to SEPA to be radioactive contaminated land, the authority is required to act in accordance with the guidance on the definition of contaminated land set out in Chapter A. Guidance on the manner in which SEPA should determine whether land appears to it to be radioactive contaminated land, by reason of substances in, on or under the land, is set out in paragraphs B.31 to B.44 below.
- B.31 There are four possible grounds for the determination, (corresponding to the parts of the definition of contaminated land in section 78A(2)) namely that:
- (a) significant harm is being caused (see paragraph B.36 below);
 - (b) there is a significant possibility of significant harm being caused (see paragraphs B.37 to B.41 below);
 - (c) significant pollution of the water environment is being caused (see paragraph B.42 below); or
 - (d) there is a significant possibility of significant pollution of the water environment being caused (see paragraph B.43 to B.44 below).
- B.32 In making any determination, SEPA should take all relevant and available evidence into account and carry out an appropriate scientific and technical assessment of that evidence.
- B.33 SEPA should identify all significant pollutant linkages (as defined in paragraph A.22 of Chapter A) as the basis for the determination. All three elements of any pollutant linkage (pollutant, pathway and receptor) should be identified. A linkage which forms a basis for the determination that land is contaminated land is then a “significant pollutant linkage”; and any pollutant which forms part of it is a “significant pollutant”.
- B. 34 SEPA should consider whether:
- (a) there is evidence that additive or synergistic effects between potential pollutants, whether between the same substance on different areas of land or between different substances, may result in a significant pollutant linkage;
 - (b) a combination of several different potential pathways linking one or more potential pollutants to a particular receptor, or to a particular class of receptors, may result in a significant pollutant linkage; and
 - (c) there is more than one significant pollutant linkage on any land; if there are each should be considered separately, since different people may be responsible for the remediation.

Consistency with Other Statutory Bodies

- B.35 In making a determination which relates to harm of non-human species, SEPA should adopt an approach consistent with that adopted by Scottish Natural Heritage. To this end, SEPA should consult that authority and have regard to its comments in making its determination.

Determining that “Significant Harm is being caused”

- B.36 SEPA should determine that land is contaminated land on the basis that significant harm is being caused where:-
- (a) it has carried out an appropriate scientific and technical assessment of all the relevant and available evidence; and
 - (b) on the basis of that assessment, it is satisfied that significant harm is being caused.

Determining that “there is a Significant possibility of Significant Harm being caused”

- B.37 SEPA should determine that land is contaminated land on the basis that there is a significant possibility of significant harm being caused (as defined in Part 3 of Chapter A), where:-
- (a) it has carried out a scientific and technical assessment of the risks arising from the pollutant linkage, according to relevant, appropriate, authoritative and scientifically based guidance on such risk assessments;
 - (b) that assessment shows that there is a significant possibility of significant harm being caused; and
 - (c) there are no suitable and sufficient risk management arrangements in place to prevent such harm.
- B.38 In following any such guidance on risk assessment, SEPA should be satisfied that it is relevant to the circumstances of the pollutant linkage and land in question, and that any appropriate allowances have been made for particular circumstances.
- B.39 To simplify such assessment of risks, SEPA may use authoritative and scientifically based guideline values, or methods for deriving values, for concentrations of the substances in, on or under the land which are appropriate to the specific pollutant linkage being considered. If it does so, SEPA should be satisfied that:
- (a) an adequate scientific and technical assessment of the information on the potential pollutant, using the appropriate, authoritative and scientifically based

guideline values, shows that there is a significant possibility of significant harm; and

(b) there are no suitable and sufficient risk management arrangements in place to prevent such harm.

B.40 In using any guideline values (including methods for deriving values), SEPA should be satisfied that:-

(a) the guideline values are relevant to the judgement of whether the effects of the pollutant linkage in question constitute a significant possibility of significant harm;

(b) the assumptions underlying the derivation of any numerical values in the guideline values (for example, assumptions regarding soil conditions, the behaviour of potential pollutants, the existence of pathways, the land-use patterns, and the availability of receptors) are relevant to the circumstances of the pollutant linkage in question;

(c) any other conditions relevant to the use of the guideline values have been observed (for example, the number of samples taken or the methods of preparation and analysis of those samples);

(d) appropriate adjustments have been made to allow for the differences between the circumstances of the land in question and any assumptions or other factors relating to the guideline values; and

(e) the guideline values are appropriate to the receptor and site under consideration.

B.41 SEPA should be prepared to reconsider any determination based on such use of guideline values if it is demonstrated to the authority's satisfaction that under some other more appropriate method of assessing the risks the local authority would not have determined that the land appeared to be contaminated land.

Determining that “Significant Pollution of the Water Environment is being caused”

B.42 SEPA shall determine that land is contaminated land on the basis that there is significant pollution of the water environment where:

(a) it has carried out an appropriate scientific and technical assessment of all the relevant and available evidence, having regard to any advice provided by SEPA; and

(b) on the basis of that assessment it is satisfied that, on the balance of probabilities, that both of the following circumstances apply:

(i) a substance is present in, on or under the land in question, which has the potential to result in significant pollution of the water environment; and

(ii) the substance in question is in such a condition that it is capable of entering the water environment by the pathway (as defined in paragraph A.16 of Part 2 to Chapter A) identified in the pollutant linkage.

Determining that "there is a Significant Possibility of Significant Pollution of the Water Environment being caused"

B.43 Consideration shall be based on the principles of risk assessment and, in particular, on the likelihood of entry resulting in significant pollution.

B.44 SEPA shall determine that land is contaminated land on the basis that there is a significant possibility of significant pollution of the water environment where:

(a) it has carried out an appropriate scientific and technical assessment of all the relevant and available evidence, having regard to any advice provided by SEPA; and

(b) on the basis of that assessment it is satisfied that, on the balance of probabilities, all of the following circumstances apply:

(i) a substance is present in, on or under the land in question, which has the potential to result in significant pollution of the water environment;

(ii) the substance in question is in, or is likely to be in, such a condition that it is capable of entering the water environment;

(iii) taking into account the geology and other circumstances of the land in question, there is a pathway (see paragraph B.42 (b)(ii) above) by which the substance can enter the water environment;

(iv) the substance is more likely than not to enter the water environment and would result in significant pollution of the water environment; and

(v) there are no suitable and sufficient risk management arrangements relevant to the pollution linkage in place to prevent such significant pollution.

Record of the Determination that Land is Radioactive Contaminated Land

B.45 SEPA should prepare a written record of any determination that particular land is contaminated land. The record should include (by means of a reference to other documents if necessary):

- (a) a description of the particular significant pollutant linkage, identifying all three components of pollutant, pathway and receptor;
- (b) a summary of the evidence upon which the determination is based;
- (c) a summary of the relevant assessment of this evidence; and
- (d) a summary of the way in which the authority considers that the requirements of the guidance in this Part and in Chapter A of the guidance have been satisfied.

ANNEX 4: Glossary of Terms

APPROPRIATE PERSON: defined in section 78A(9) as: “any person who is an appropriate person, determined in accordance with section 78F..., to bear responsibility for any thing which is to be done by way of remediation in any particular case.”

CONTAMINANT: a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of the water environment. Where contaminant is used it may be in reference to either radioactive or non radioactive contaminants. To assist clarity a definition of “radioactive contaminant” has been introduced which is defined in this glossary

CONTAMINATED LAND: defined in section 78A(2) as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

“(a) significant harm is being caused or there is a significant possibility of such harm being caused, or;

“(b) significant pollution of the water environment is being caused or there is a significant possibility of such pollution being caused.”

ENFORCING AUTHORITY: defined in section 78A(9) as:

(a) in relation to a special site, SEPA;

(b) in relation to contaminated land other than a special site, the local authority in whose area the land is situated.

HARM: is defined in (the modified) S78(A)4 as:

“lasting exposure to any human being resulting from the after-effects of a radiological emergency, past practice or work activity.”

LOCAL AUTHORITY: defined in section 78A(9) as meaning any Scottish local authority.

RADIOACTIVE CONTAMINANT: a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of the water environment. *Paragraph A.13* Radioactive contaminant is used only when the substance in, on or under the land is a radioactive substance, i.e. it meets the definition of substance as modified by the Radioactive Contaminated Land (Scotland) Regulations 2007

RADIOACTIVE CONTAMINATED LAND: is defined as:

“any land which appears to SEPA to be in such a condition, by reason of substances in, on or under the land, that –

“(a) SIGNIFICANT HARM is being caused or there is a SIGNIFICANT POSSIBILITY of such harm being caused; or

“(b) SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT is being caused or there is a significant possibility of such pollution being caused”.

PATHWAY: is one or more routes or means by, or through, which a receptor:

(a) is being exposed to, or affected by, a contaminant, or

(b) could be so exposed or affected. *Paragraph A.16*

POLLUTANT: a contaminant which forms part of a pollutant linkage. *Paragraph A.19*

POLLUTANT LINKAGE: the relationship between a contaminant, a pathway and a receptor. *Paragraph A.19*

RECEPTOR: either

(a) human beings

(b) non-human species

(c) the water environment

REMEDIATION: defined in section 78A(7) as

“(a) the doing of anything for the purpose of assessing the condition of –

“(i) the contaminated land in question;

“(ii) the water environment affected by that land; or

“(iii) any land adjoining or adjacent to that land;

“(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose –

“(i) of preventing or minimising, or remedying or mitigating the effects of, any significant harm, or any significant pollution of the water environment, by reason of which the contaminated land is such land; or

“(ii) of restoring the land or water environment to its former state; or

“(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or water environment.”

REMEDIATION ACTIONS: any individual thing which is being, or is to be, done by way of remediation.

REASONABLE GROUNDS: is the set of conditions that SEPA must satisfy in order to justify inspecting land, namely that:

- (a) A substance arising from a past practice, past work activity, or radiological emergency has been identified as present on the land; and
- (b) Receptors have been identified on that land; and
- (c) It is SEPA's opinion that it is possible that the identified contamination may cause lasting exposure giving rise to radiation doses exceeding those set out in Part A of this guidance.

REGISTER: the public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.

SEPA: the Scottish Environment Protection Agency.

SIGNIFICANT HARM: defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance in Chapter A.

SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM: a possibility of significant harm being caused which, by virtue of section 78A(5), is determined to be significant in accordance with the statutory guidance in Chapter A.

SIGNIFICANT POLLUTANT LINKAGE: a pollutant linkage which forms the basis for a determination that a piece of land is contaminated land. *Paragraph A.23*

SIGNIFICANT POLLUTION OF THE WATER ENVIRONMENT: defined in section 78A(5). It means any significant pollution of the water environment which is determined to be significant in accordance with the statutory guidance in Chapter A.

SPECIAL SITE: defined by section 78A(3) as:

“any contaminated land

“(a) which has been designated as such a site by virtue of section 78BC or 78C(7) or 78D(6)...; and

“(b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)...”.

SUBSTANCE: is defined in (the modified) S78A(9) as:

“substance” means, whether in solid or liquid form or in the form of a gas or vapour, any substance which contains radionuclides that are or have been processed

as part of a work activity or past practice, but shall not include radon gas and any radionuclide present as a result of the radioactive decay of radon;

WATER ENVIRONMENT: has the same meaning as in section 3 of the Water Environment and Water Services (Scotland) Act 2003.