

Environment Act 1995
The UK Strategy for Radioactive Discharges

Statutory Guidance

February 2008
Paper SG/2008/13

The Scottish Environment Protection Agency (SEPA) and the UK Strategy for Radioactive Discharges

Incorporating

Part I

Statutory Guidance from the Scottish Ministers to the Scottish Environment Protection Agency (SEPA), on the control of radioactive discharges into the environment,
made under section 31 of the Environment Act 1995, for the purpose of implementing the UK Strategy for Radioactive Discharges

Part 2

Explanatory document accompanying the Statutory Guidance

SEPA and the UK Strategy for Radioactive Discharges

Part 1: Statutory Guidance

Statutory Powers

1.1 Under section 31 of the Environment Act 1995 (EA95)¹

“The [Scottish Ministers] shall from time to time give guidance to SEPA with respect to aims and objectives which [they consider] it appropriate for SEPA to pursue in the performance of its functions.”

1.2 The guidance

“...must include guidance with respect to the contribution which, having regard to SEPA’s responsibilities and resources, [the Scottish Ministers] consider it appropriate for SEPA to make, by the performance of its functions, towards attaining the objective of sustainable development.”

1.3 *“In performing its functions, SEPA shall have regard to...[such] guidance...”*

1.4 The following is guidance given under the above provisions.

2. Introduction

2.1 At the 1998 Ministerial meeting of the Oslo and Paris (OSPAR) Commission, in Sintra, Portugal, contracting parties to the 1992 Convention for the protection of the marine environment of the north-east Atlantic agreed an OSPAR Strategy for Radioactive Substances. The objective of the OSPAR Commission with regard to radioactive substances, including waste, is to prevent pollution of the maritime area, as defined under the Convention, from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background levels for naturally occurring radioactive substances and close to zero for artificial radioactive substances.

2.2 It was agreed at Sintra that the OSPAR Strategy was to be implemented in accordance with the following time frame:

- by the year 2000, the OSPAR Convention will, for the whole maritime area, work towards achieving further substantial reductions or elimination of discharges, emissions and losses of radioactive substances
- by the year 2020, the OSPAR Commission will ensure that discharges, emissions and losses of radioactive substances are reduced to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, are close to zero.

2.3 In July 2002, the UK Government and the devolved administrations published the UK Strategy for Radioactive Discharges 2001-2020² (the UK Strategy). The UK Strategy sets out how the UK will achieve substantial reductions in radioactive discharges to the marine

¹ 1995 (c.25); the functions of the Secretary of State were transferred to the Scottish Ministers by virtue of section 53 of the Scotland Act 1998 (c.46).

² UK strategy for radioactive discharges 2001-2020, July 2002, Defra, ISBN 0-85521-013-3.

environment in the period up to 2020, in order to implement the agreements reached at the 1998 Ministerial meeting of OSPAR. Those reductions are to be delivered primarily through the process, under the Radioactive Substances Act 1993 (RSA93), of authorisation for the discharge of radioactive waste.

2.4 This document provides guidance to SEPA on the contribution it should make towards achieving the requirements of the UK Strategy for Radioactive Discharges. The UK's position is currently set out in the UK Strategy and as such SEPA will take account of that publication through its regulatory process. This guidance, to which SEPA must have regard, is necessary because the Sintra agreement was at contracting party, that is UK Government, level but is to be delivered at arms' length from Government, in Scotland by SEPA.

3. *The Statutory Guidance*

3.1 EA95 sets out some of SEPA's statutory duties. The overall aim and key objectives of SEPA are approved by the Scottish Ministers as part of SEPA's published corporate planning process. Periodically, the Scottish Executive publishes policies and priorities that are relevant to SEPA, which, together with the specific provisions in SEPA's Management Statement, Financial Memorandum and SEPA's statutory powers and duties, form the main elements of the policy framework for SEPA's activities.

3.2 In the exercise of its statutory duties, this guidance requires that SEPA must have regard to what is set out in the UK Strategy for Radioactive Discharges.

3.3 This guidance applies to SEPA in the exercise of its statutory duties for authorising the discharge of radioactive waste, under the terms of RSA93, and also for the exercise of its related administrative arrangements for the issue of any letters of agreement in respect of discharges of radioactive waste from premises exempted from the provisions of RSA93, by virtue of section 42 of that Act.

4. *Sustainable Development*

4.1 This guidance [*the SE website address of the final approved guidance*] should be read in conjunction with Statutory Guidance, from the Scottish Ministers to SEPA on sustainable development, December 2004 (Paper 2004/21), which outlines the contribution SEPA should make generally towards sustainable development by performance of its functions, whilst having regard to its responsibilities and resources. SEPA must have regard to that guidance since it defines actions that SEPA should take to ensure sustainable development is embedded fully into its day-to-day activities and performance management systems.

SEPA and the UK Strategy for Radioactive Substances

Part 2: Explanatory document accompanying the Statutory Guidance set out in Part 1

Introduction

1. Part I sets out Statutory Guidance to SEPA on the UK Strategy for Radioactive Discharges, within the context of the OSPAR Strategy for Radioactive Substances.

2. The OSPAR Strategy required that by 2000 the OSPAR Commission worked towards achieving further substantial reductions or eliminations of discharges, emissions and losses of radioactive substances. It further required that by 2020 the Commission would ensure that discharges, emissions and losses of radioactive substances were reduced to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, were close to zero. OSPAR is developing definitions to satisfy these requirements but, in the meantime, each contracting party has been required to present a national plan to demonstrate the steps being taken towards the substantial reductions required by the OSPAR Strategy.

3. Following widespread consultation, the UK Government and the devolved administrations published the UK Strategy for Radioactive Discharges for 2001 - 2020³ (the UK Strategy) in July 2002. The UK Strategy sets out future discharges and reductions on a sector-by-sector basis. The sectors are nuclear-fuel production and uranium enrichment, nuclear-energy production, spent-fuel reprocessing, research facilities, defence facilities, and others (including industrial, oil exploration and extraction and medical). The UK Strategy makes clear that reductions will be achieved not only by improvements and changes in technology but also by closure of facilities. Within the UK, it was agreed that the UK Strategy would be submitted to the OSPAR Commission as the national plan to demonstrate the steps being taken towards the substantial reductions in discharges required by OSPAR.

4. The responses to the 2000 public consultation on the draft UK Strategy were polarised. Some felt that the draft did not go far enough in reducing discharges. Others took the view that the costs of reducing radioactive discharges further would be disproportionate to any radiological benefit. Nevertheless, the regulatory impact assessments carried out in support of the Strategy supported the view that the UK Strategy struck a reasonable balance.

5. The UK Strategy ensures that the effect of any discharge within the UK, for the most affected members of the public, is less than 2% of internationally accepted dose limits. Thus the effects of the discharges will be barely measurable at a distance from the point of discharge. They go well beyond what is required on radiological grounds, in order to demonstrate that the UK is serious about complying with its international obligations.

6. The UK Strategy is to be kept under regular review to take account of developments in Government policy, changes in technology, commercial decisions within the nuclear industry and developments in understanding of the impact of radionuclides in the marine environment.

³ UK strategy for radioactive discharges 2001 – 2020, Defra, July 2002, ISBN 0-85521-013-3

7. It was always foreseen that the UK Strategy needed to be delivered through authorisations to dischargers of radioactive waste. Those authorisations are issued by the environment agencies, in Scotland SEPA, statutorily under the terms of the Radioactive Substances Act 1993 (RSA93), or, in the case of premises to which Crown Immunity applies, for example premises occupied by the Ministry of Defence, by administrative letters of agreement.

8. This explanatory document sets out, for Scotland, the rationale behind Part I, the Statutory Guidance issued to SEPA, which requires SEPA to take account of the UK Strategy in exercising its regulatory functions under the RSA93.

Purpose of the Statutory Guidance with regard to OSPAR

9. The UK is a contracting party to OSPAR, which is not an enforceable instrument but rather an incentive convention. Although the UK cannot be prosecuted through failure to implement OSPAR requirements, such failure can compromise the UK's standing and reputation. The Scottish Government must ensure that, in devolved areas such as environmental protection, it complies with UK obligations. The purpose of the statutory guidance is therefore to provide a transparent and auditable link demonstrating the commitment of the Scottish Government to ensuring that, through SEPA's authorisation process under the terms of RSA93, the devolved administration in Scotland contributes to the UK commitment to comply with the OSPAR Strategy for Radioactive Substances.

10. In contributing to that commitment, SEPA should have regard to the approach used by the other environment agencies in the UK. In that context, SEPA will need to keep itself informed of the work of the Environment Agency on the use of Best Available Techniques (BAT) in the optimisation of doses and the setting of discharge limits. In Scotland, SEPA's authorisation process continues to use the BPM concept to consider the need for the reduction of authorised limits.

The effect of the UK Discharge Strategy

11. The UK Discharge Strategy has the following main features:

- a demonstration as to how the UK will achieve substantial reductions in radioactive discharges to the marine environment in the period up to 2020 in order to implement agreements reached at the 1998 Ministerial meeting and subsequent meetings of the OSPAR Commission
- achievement of major reductions in discharges from nuclear facilities across the UK
- challenging, but achievable, reductions which will substantially reduce inputs to the marine environment without disproportionate costs to industry
- annual doses to groups most affected being less than 2% of the internationally accepted limit (1 millisievert per year)
- reductions achieved by a combination of plant closures, introduction of new abatement techniques and rigorous application of best practicable means (BPM) to reduce discharges
- a continuation of the progressive downward trend in UK discharges to meet the OSPAR Radioactive Discharge Strategy of concentrations in the marine environment adding close to zero to historic levels by 2020

- Within the policy of progressive reduction, some flexibility will be maintained to safeguard other key objectives, including the safe and timely decommissioning of redundant facilities and the operational capabilities of the armed forces. (See paragraph 6.1.3 of the UK National Strategy for Radioactive Discharges 2001-2020).

Nature of the guidance

12. This statutory guidance is issued under section 31 of the Environment Act 1995 (EA95). The nature of this guidance is ‘high level’ and sets out relevant aims and objectives that we consider to be appropriate within the context of sustainable development for SEPA to pursue in performance of its functions. Thus, in order to avoid impinging on the regulatory independence of SEPA, foreseen by its setting up as a regulator at arms’ length from Government, we have not directed SEPA as to how it should take account of the requirement being placed upon it. Rather, the provision of detailed guidance is to be left to SEPA itself, and the manner and nature of such detailed prescription, for example desk instructions to officers, is to be left to SEPA, within its normal regulatory process. We consider this to be a reasonable balance. In its authorisation process, SEPA will take account of OSPAR and the UK Discharge Strategy for radioactive substances. At the same time, SEPA will ensure through its existing procedures that the authorisation process is open and transparent.

13. Section 31 of EA95 requires that the Scottish Ministers consult with SEPA, and other bodies considered appropriate, before issuing statutory guidance of this nature. This explanatory document takes account of comments received during that consultation. There was no need, however, to amend the Statutory Guidance itself.

14. As also required by section 31, the draft guidance was laid before the Scottish Parliament in February 2008 before it could be given.

15. A further requirement (under section 31(8) of EA95) is that the Scottish Ministers shall arrange for any guidance issued under that section to be published in such manner as they consider appropriate. In this case, the guidance has been placed on the Scottish Government website at *hyperlink (This will be inserted when the Statutory Guidance is issued.)*

SEPA and OSPAR

16. Although the UK Strategy is the means whereby the UK will comply with the UK’s OSPAR commitment for radioactive substances, you will note that the statutory guidance, as well as referring to the UK Strategy, also refers to OSPAR itself. This is because the UK Strategy seeks reductions on a sectorial basis across the UK, see paragraph 3 above. This sectorial approach allows for rationalisation of waste management plans within sectors so that, for example, discharges at one site might increase as a result of concentrating waste management operations at that site but with the result that discharges at other sites will decrease. Thus, for the purposes of the OSPAR Strategy for Radioactive Substances, the Scottish Government does not require SEPA to always require a decrease in authorised limits for discharges. This is because it will be possible for the UK to comply with a reduction on a sectorial basis by, for example, a reduction in England, say, and no change or even an increase in Scotland. The reverse of course can also apply. As a result of comments received

during the earlier consultation, it is emphasised that this is to allow rationalisation of waste plans, which will always be subject to BPM and BPEO requirements. It does not imply that where reductions in one part of a sector have been achieved, by whatever means, then relaxations may be allowed elsewhere.

Decommissioning

17. The Scottish Government considers that decommissioning of nuclear sites is an inherently justified activity. Thus, provided that discharges are minimised by the normal regulatory approach of using BPM, and the processes that they derive from are considered to be best practicable environmental option (BPEO) or equivalent, then in principle we do not think that decommissioning, when set against historic operational discharges, need compromise OSPAR commitments.

18. As the UK Strategy makes clear, the reduction of liquid discharges as an over-riding priority may be achievable only at the expense of increasing activity in gaseous discharges or increasing the volume of solid waste arisings. Such transfer of radioactivity between different environmental compartments can result in higher doses to workers or to critical groups. Determining where the appropriate balance lies will be informed by relevant BPEO studies but reductions in liquid discharges proposed in the UK Strategy should be achieved in ways that have no unacceptable implications for doses to workers or the general public. This means that where there may be a choice between decommissioning options, SEPA need not conclude that the option with the lowest liquid discharge is to be necessarily preferred for OSPAR purposes if, on balance, another option is shown to be BPEO.

19. The level of annual discharge from a particular site may be affected by the pace of decommissioning. It is not the intention of the Scottish Government to secure reductions in discharge profiles by slowing down decommissioning projects thus reducing annual discharges in effect by spreading them over a longer period. We do not see a contradiction between a requirement to progressively reduce discharges and an operator's decision to decommission quickly, provided of course that SEPA is satisfied that the discharges reflect BPEO and BPM. Thus, we consider that SEPA can and should take account not only of the annual discharge from any particular project, but also the total discharge during the lifetime of any project. There may very well be cases where speeding up a decommissioning project might lead to significantly lower total discharges, even if the annual discharges are higher, and we do not consider that would contradict the OSPAR Strategy.

20. The UK Discharge Strategy recognises the irregular nature of discharges from the submarine maintenance programme, although these are already very low.

Dounreay

21. Within the OSPAR Strategy, the Dounreay site falls within the research sector. That is because it was the UK test-bed for the development of fast-reactor technology and demonstration of the associated fuel cycle. The Government's announcement in 2001 that there would be no further reprocessing at Dounreay has greatly reduced the discharge profile for that site. Nevertheless, the process of decommissioning itself will result in fluctuations in that discharge profile. Because of the importance of Dounreay within the research sector,

however, it is unlikely that reductions elsewhere within the UK for that sector can offset any increase in discharges from the Dounreay site. Consequently, SEPA may be faced with variability in discharges from the Dounreay site that appear to contradict the OSPAR commitment for progressive and substantial reductions of discharges. The Scottish Executive considers that such variability need not contradict OSPAR commitments when set against historic arisings from that site and the requirement to decommission that site, provided that SEPA considers that those discharges comply with its on-going regulatory requirement to use BPM and BPEO.

22. In the context of historic arisings, the baseline period for which Dounreay discharges are to be compared with is the period 1995-2001, as agreed within the OSPAR Radioactive Substances Committee. During this period, many operations on the site were suspended as a result of the joint SEPA and Health and Safety Executive audit of the Dounreay site. Thus, the baseline discharge for the Dounreay site is lower than it would otherwise have been. Nevertheless, because the site is now entirely in the decommissioning stage, we consider the 1995-2001 baseline to be appropriate when taken with the views expressed in paragraph 19 of this explanatory document.

Other sources of discharge

23. No discharge profile or target is presently set for this sector. Nevertheless, we expect that, in the course of SEPA's normal regulatory activities for that sector, it will continue to exercise its strict controls and reduce discharges wherever practicable by, for example, the use of BPM clauses in certificates of authorisation issued under RSA93. We recognise, however, that there are circumstances, for example in the discharge of naturally occurring radioactive material, where discharges of radioactivity are not readily subject to control and it may not be practicable to require reductions.

Information gathering

24. Again, as the guidance is a high-level document, we have imposed a requirement for SEPA to take account of the UK Strategy for Radioactive Discharges within the general context of the OSPAR Strategy for Radioactive Substances, when reviewing and issuing authorisations to discharge radioactive waste from certain classes of site. We have set out some considerations above, but we have left SEPA to deal with the gathering of any necessary information as a regulatory matter as it sees fit by, for example, revision of the RSA93 authorisation application process for nuclear sites to require the provision of information.

Financial Implications

25. There should be no additional financial burdens for SEPA as this should impose no new requirements to SEPA's existing regulatory practices. The impact on dischargers has been set out in the UK Discharge Strategy for Radioactive Discharges 2001-2020.

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