

Radioactive Contaminated Land

Contaminated Land (Part 2A) and radioactivity

August 2012

This briefing note describes how the Part 2A regime covers radioactive contamination, how it works, how it interacts with other regimes and our role as a regulator.

The Part 2A Contaminated Land Regime

Part 2A of the Environmental Protection Act 1990 set up a system for the regulation of contaminated land in England and Wales. The regime provides a framework for identifying and remediating (cleaning up) contaminated land.

Contaminated land is land that poses an unacceptable risk to human health or the environment through its current use. The Part 2A regime was extended, in 2006 and 2007, to apply to radioactive contaminated land including radioactivity originating from nuclear licensed sites.

General information about the Part 2A regime is available on Defra's, Welsh Government's and the Environment Agency's web sites.

Extending Part 2A to cover Radioactive Contaminated Land

Defra and the Welsh Government extended the original Part 2A regime to include radioactive contaminated land in England and Wales, including radioactivity originating from nuclear licensed sites.

These changes were made to put into place certain requirements of Directive 96/29/EURATOM (referred to as the Basic Safety Standards Directive). The extended regime takes account of the special nature of radioactive contamination and the specific requirements of the Basic Safety Standards Directive.

The original statutory guidance for the Part 2A regime was rewritten and reissued (in 2006 and again in 2012) to provide us and the local authorities with guidance on interpreting both the original regime and the extension.

Scope of the extension of Part 2A

The extension allows radioactive contaminated land to be identified and remediated. This is land that is causing harm or posing a significant possibility of harm to human health as a result of radioactivity. It only applies in circumstances where the radioactivity is the result of a past practice or work activity, or the after-effects of a radiological emergency. This includes substances containing artificial radionuclides or processed natural radionuclides.

The extended regime doesn't apply to:

- radioactivity on land causing significant harm to the wider environment or the pollution of controlled waters
- naturally occurring radon gas. You can find further information on managing risks from radon gas on the Health Protection Agency's web site: <http://www.hpa.org.uk/>
- risks arising from changes in the way land contaminated with radioactivity is used. These risks are controlled under the Town and Country Planning system [see Briefing Note 3]
- radioactivity on land within the boundary of a nuclear licensed site [see Briefing Note 5]

Radioactive Contaminated Land

The presence of radionuclides on land doesn't automatically mean that it is 'radioactive contaminated land' under the extended Part 2A regime. For land to be determined as radioactive contaminated land a significant pollutant linkage must be present.

A pollutant linkage comprises a radioactive contaminant and a human receptor, with a pathway capable of linking the two. All three elements need to occur on site for a pollution linkage to exist. The pollutant linkage becomes 'significant' if it results in harm to human health, or there is significant possibility of such harm occurring.

The statutory guidance sets out the levels of radioactivity that should be considered as causing harm:

- an effective dose of 3 mSv or more, per year;
- an equivalent dose to the lens of the eye of 15 mSv or more, per year; or,
- an equivalent dose to the skin of 50 mSv or more, per year.

A significant possibility of harm refers to the probability or frequency of a situation or event occurring which could lead to the sort of exposure levels described above.

Identifying Radioactive Contaminated Land

Local authorities have a duty to inspect land under the extended Part 2A regime, but there must be reasonable grounds for inspecting land for radioactivity. Reasonable grounds are defined in the statutory guidance. (See also our frequently asked questions (FAQs)).

Inspecting potential radioactive land may involve desk studies, site visits for visual inspection and limited sampling of surface deposits or surface radiation surveys. We will carry out an intrusive investigation on behalf of the local authority if the results of desk studies and non-intrusive surveys show the need for one.

Only local authorities have the power to determine land as radioactive contaminated land (the Environment Agency has no such powers). Once they determine a site as radioactive contaminated land it becomes a special site and the Environment Agency takes over as the regulator.

Remediating (Cleaning up) Radioactive Contaminated Land

Where necessary, remediation should include the demarcation of the land, arrangements for monitoring the harm posed and controlling access to the demarcated area. Remediation may also include intervention to reduce the doses received by the exposed individual(s), but we assess this case-by-case. [See Briefing Note 8].

Intervention includes any action taken on any component of the pollutant linkage that results in reducing the exposure of the receptor. Where remediation includes an intervention we must consider the cost and harm (including social cost) of any intervention.

Intervention may only be taken where it is justified and optimised. Intervention is justified when the benefits of reducing the detriment outweigh the harm and costs (including social costs) of taking a specific action. Detriment refers primarily to health detriments associated with the exposure of the individual concerned, but it may also include a detriment associated with blight, for example to property.

For an intervention to be optimised, the chosen action must maximise the difference between the benefit produced by the reduction in detriment and the harm or costs (including social costs) of achieving it.

The Environment Agency's Roles and Responsibilities under Part 2A

We have specific responsibilities under the regime to help local authorities inspect potential radioactive contaminated land. These include:

- informing the relevant local authority if we identify any relevant information on sites that may require inspection;
- giving advice for local authorities on how to carry out desk-based investigations and select contractors for non-intrusive surveys; and,
- making any necessary intrusive investigations on behalf of the local authority.

We have produced guidance to help local authorities carry out these initial stages of inspection, including information on how to decide if an intrusive investigation is necessary. Both guidance documents (on the collation and assessment of documentary information, and visual inspection and limited surveys) are available on our web site.

Radioactive contaminated land is a type of special site under the extended Part 2A regime. As such we become the enforcing authority for the remediation of radioactive contaminated land. In certain circumstances, where there is no other person liable for the remediation, we have a duty to remediate.

We will not advise land owners or members of the public on whether a particular site needs to be regulated as radioactive contaminated land under the extended Part 2A regime. Anyone concerned or seeking advice about whether a site should be regulated should contact their local authority.

Extension of Part 2A and Other Regimes

– Nuclear Licensed Sites

The Health and Safety Executive has powers under the Nuclear Installations Act 1965 (NIA65) to regulate land contaminated with radioactivity within the boundaries of nuclear licensed sites. The extended Part 2A regime does not apply to land contaminated with radioactivity on nuclear licensed sites. See Briefing Note 5 for further information.

– Environmental Permitting Regulations 2010 (EPR2010)

A permit under EPR2010 is needed to accumulate or dispose of radioactive waste resulting from remedial (clean up) work, other than that waste which is exempt. See Briefing Note 6 for further information on the Environmental Permitting Regulations 2010.

References

Further information and guidance on Part 2A and radioactivity can be found in the Statutory Guidance covering radioactive contaminated land published in April 2012 and available on the DECC web site at:

http://www.decc.gov.uk/en/content/cms/meeting_energy/nuclear/radioactivity/land/land.aspx

Equivalent Statutory Guidance from the Welsh Government will be published in November 2012 at:

<http://wales.gov.uk/topics/environmentcountryside/epq/chemicalsradioactivity/radioactivity/?lang=en>