

# science summary



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SCHO0106BKDU-E-P

## Initial Radiological Assessment Methodology

Science Summary: SC030162

The Radioactive Substances Act 1993 (RSA 93) provides the framework for controlling the generation and disposal of solid, liquid and gaseous radioactive waste in the UK so as to protect the public and the environment. In particular, RSA 93 requires prior authorisation for the disposal or discharge of radioactive waste to the environment. The UK Environment Agencies are required to ensure that doses to critical groups of the public do not exceed specified dose constraints, as part of the process of authorising such disposals or discharges.

The Environment Agency, Scottish Environment Protection Agency and Department of Environment in Northern Ireland, in collaboration with the Food Standards Agency and National Radiological Protection Board (now Health Protection Agency), have developed and published principles and guidance for the prospective assessment of public doses. A staged approach to the assessment of critical group doses for authorisation purposes is recommended, the first stage consisting of a simple and cautious assessment of the critical group dose (initial radiological assessment).

These Environment Agency Science reports describe an initial radiological assessment methodology which may be used by the Environment Agencies and applicants for RSA 93 authorisations. It is hoped that the reports will be particularly useful to people who are not in the 'nuclear industry' but who use radioactive substances in their work, dispose of them or are regulated by the Environment Agencies.

The methodology allows assessment of the release of 100 radionuclides via the following routes:

- air;
- estuarine/coastal waters;
- rivers/streams;
- public sewer.

Doses can be calculated for seven different groups of the public and to four age groups (including the fetus), who may receive doses as a result of discharges to these release routes.

The methodology is based on dose per unit release (DPUR) data, which are combined with authorisation limits to calculate doses to members of the public.

This summary relates to information from Science Project SC030162 reported in detail in the following output(s).

**Science Report SC030162**  
**Initial Radiological Assessment Methodology –**  
**Part 1 User Report**  
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**Science Report SC030162**  
**Initial Radiological Assessment Methodology –**  
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