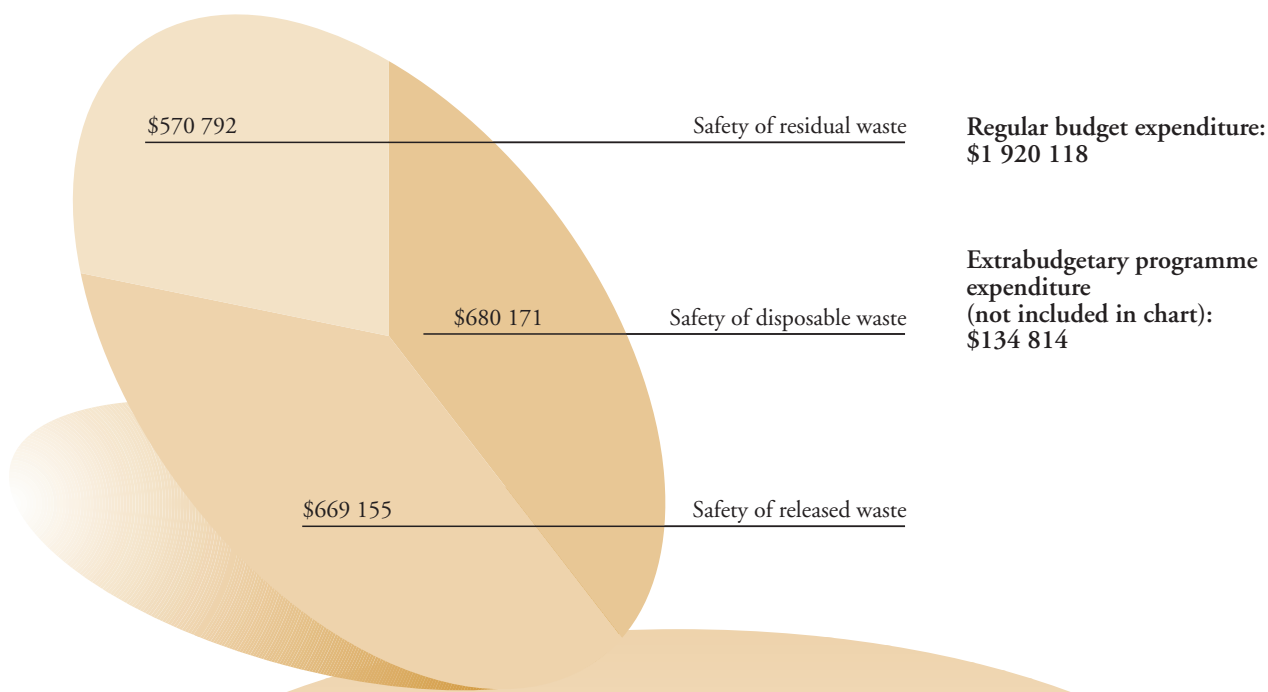


RADIOACTIVE WASTE SAFETY



To promote the safe management of the non-usable radioactive remains from nuclear energy and other practices making use of radioactive materials, including: the safe management of radioactive waste; the control of environmental releases of radioactive materials into the environment; and the safe restoration of environments having radioactive residues from past events and activities.

Programme objective

The programme on waste safety is focused on the establishment of a comprehensive set of internationally agreed safety standards with the active involvement of Member States and under the supervision of an international advisory committee. A Safety Requirements document on the near surface disposal of radioactive waste was recommended for approval by the Agency's Board of Governors. An international conference on topical issues in nuclear, radiation and radioactive waste safety, held in Vienna, provided guidance for the future direction of work on radioactive waste disposal safety and residual waste safety.

Safety of disposable waste

Following the recommendations of a 1997 specialists meeting on the application of the concepts of exclusion, exemption and clearance, work focused on establishing agreed terminology and a common understanding of the terms and of their application in delineating the scope of regulations concerned with protection from ionizing radiation. A draft Safety Guide on this subject was developed and reviewed at a Technical Committee meeting in Vienna.

Progress was made on several documents in the Radioactive Waste Safety Standards (RADWASS) programme. Of particular note was the endorsement by the Advisory Commission for Safety Standards (ACSS) of a Safety Requirements document on the near surface disposal of radioactive wastes. A supporting Safety Guide on the assessment of near surface disposal facilities, and two other Safety Guides on the decommissioning of different types of facilities, were also approved for publication.

The Agency is encouraging research through a CRP on methods for assessing the safety of near surface disposal facilities. A general methodology for assessment is being developed which will be applied in the evaluation of test cases concerned with trench and vault disposal facilities typical of those used in the Russian Federation, Eastern Europe, Western Europe and North America, and to the 'borehole' types of repository operated and planned in various countries. In this connection, expert reviews of the safety of near surface repositories in South Africa and the Republic of Moldova were conducted. For the trench and vault disposal facilities, the review confirmed that an incident involving leaking waste containers at the disposal site was not of radiological significance. For the borehole types of repository, the experts gave advice to help ensure the safety of a histone repository which does not comply fully with current design standards.

Safety of released waste

Increasing attention is being given to the environment and to its well-being in international and regional agreements and conventions. The Agency is striving to harmonize the approach taken for protecting the environment against the effects of ionizing radiation with that commonly adopted for protection against other pollutants. A paper which addresses the principles and the technical issues involved was finalized at a Technical Committee meeting before being circulated to Member States. Its purpose is to stimulate discussion so that steps can be taken towards developing an international standard in this area.

In order to establish databases recording all types of controlled radioactive releases and disposals into the atmosphere and the oceans, an Agency technical document (IAEA-TECDOC-588) on solid radioactive disposals to the marine environment was updated, and

a prototype database of discharges of gaseous and liquid materials into the environment was developed. At the request of the Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (London Convention, 1972), the Agency provided advice on the types of materials containing radionuclides which can be exempted from the requirements of the convention. The report containing the advice was presented at the 20th meeting of Contracting Parties to the Convention.

Safety of residual waste

The current programme of assessments of the radiological conditions at sites where there are residues from previous nuclear activities, such as nuclear weapons testing and waste dumping, was completed with the publication of four documents in the Radiological Assessment Reports Series. These cover the radiological situations at: Bikini Atoll, Marshall Islands; Mururoa and Fangataufa Atolls in French Polynesia; Semipalatinsk, Kazakhstan; and in the Kara Sea following high level waste dumping. In the case of Bikini Atoll and Semipalatinsk, consideration had to be given to the prospects for resettlement by populations in the affected areas. For this purpose, guidance on radiological principles and criteria for guiding decisions on the cleanup and reoccupation of contaminated areas was developed and published as IAEA-TECDOC-987. In addition, a special international conference was held to disseminate the results of the study of the radiological situation at the Mururoa and Fangataufa Atolls, and participants in the study visited the South Pacific to present the results to the people of that region.

Safety Guides on the decommissioning of nuclear power plants and of medical, industrial and research facilities where radioactive materials are being used were approved for publication as part of the RADWASS programme. These documents provide Member States with comprehensive guidance on the steps and considerations necessary to ensure safety in the various stages of decommissioning, leading to final release of the facility and the site from regulatory control.

