

GUIDELINES FOR WASTE MANAGEMENT APPLICATION/PLAN TO DISPOSE OF UNSEALED RADIOACTIVE SUBSTANCES



Under the *Radiation Protection and Control (Ionising Radiation) Regulations 2000*, no person is permitted to dispose of a radioactive substance without first obtaining the approval of the SA Environment Protection Authority (Regulation 133). For unsealed radioactive substances the registered occupier of the premises in which the substances are kept or handled is responsible for making the application (Regulation 134).

A useful document which should be read in conjunction with these guidelines is the *National Health & Medical Research Council (NHMRC) Code for Disposal Facilities for Solid Radioactive Waste (2018)*

<https://www.arpana.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpsc3>. To expedite the processing of disposal applications by the EPA this code should be followed wherever possible.

1 GENERAL

Under Regulation 134 an application may relate to the disposal of a variety of unsealed radioactive substances on more than one occasion extending over a period of up to 12 months from the date of approval.

The application must be in writing and contain:

- details of the substance(s) to be disposed of including their chemical and physical form
- the maximum activities of the substances likely to be disposed of, and the arrangements to prevent the maximum activities being exceeded
- details of the disposal place(s)
- the approximate date(s) of disposal
- details of the method of the proposed disposal including details of packaging, storage, segregation, labelling, monitoring and transport
- the name of any companies or contractors (other than the registered occupier) who it is proposed will handle the substance(s) during the course of disposal.

2 WASTE MANAGEMENT PLAN

It is not sufficient that an application describes the proposed methods of disposal and the quantities of radionuclides involved. The application should include a plan which gives details of all aspects of the management of the waste including working rules, record-keeping, segregation, and other controls.

A suggested template for preparing a waste management plan is as follows:

1. Find out what radionuclides and activities are used per year. Allow for growth in usage etc., and set the maximum activities likely to be brought into the organisation.

Find out who uses the radionuclides and where.

2. Subtract the activity lost by decay before and during (but not after) use.
3. Subtract the activity likely to leave the organisation (eg. inside patients).
4. The remaining activity is the waste to be managed.

5. Next consider segregation into disposal pathways (after use):

- a. disposal to atmosphere via fume cupboards etc.
- b. disposal to sewerage
- c. disposal to incinerator *
- d. storage to allow for decay
- e. interim storage pending approval of disposal pathway.

Determine the activities in each pathway, and specify the arrangements that your organisation has in place to prevent the maximum activities of the substances likely to be disposed of, from exceeding those activities indicated in the plan.

[*The only incineration facility which has been approved by the EPA is the Veolia Environmental Services incinerator, at 500 Churchill Road, Kilburn]

6. Approval is needed for disposal pathways a, b and c.

7. Consider in detail (on a laboratory to laboratory basis) for inclusion in the application such things as:

- o segregation arrangements, including any associated with option 5d
- o where waste is stored/collected
- o approximate date/s or the disposal rate, eg daily, weekly or monthly when the substance(s) will be disposed of
- o types and labelling of containers, bags, etc
- o any monitoring that is carried out
- o record-keeping
- o laboratory working rules concerned with waste management.

Further information

Legislation

Legislation may be viewed at: www.legislation.sa.gov.au

Copies of legislation are available for purchase from:

Service SA Government Legislation Outlet	Telephone:	13 23 24
Adelaide Service SA Centre	Facsimile:	(08) 8204 1909
108 North Terrace	Internet:	https://service.sa.gov.au/12-legislation
Adelaide SA 5000	Email:	ServiceSAcustomerservice@sa.gov.au

For general information please contact:

Radiation Protection Division	Telephone:	(08) 8463 7825
GPO Box 2607	Facsimile:	(08) 8124 4671
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