Annual waste management plan/application for approval to dispose of unsealed radioactive material for 2024–25

Please send the completed plan/application:

Email: radiationprotection@sa.gov.au

Post: Radiation Protection Branch
Environment Protection Authority
GPA Box 2607
Adelaide SA 5001

For enquiries, please contact the Radiation Protection Branch on tel: 8463-7826 or email: radiationprotection@sa.gov.au

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Name and address of organisation _____

Applicant name_____

Applicant position title _____

Contact _____

Email _____

Signature _____

Date _____

Estimated quantities of unsealed radioactive material purchased and disposed of in 2024–25

Radionuclides	Activity purchased				
Chemical and physical form	(MBq)	Gaseous Via fumehood (MBq)	Aqueous liquid Via sinks or sewers (MBq)	Solid/liquid Allow for decay, then via general waste (MBq)	Solid/liquid Interim storage pending disposal (specify proposed pathway)
	Total:	**Total:**	**Total:**	**Total:**	**Total:**

NOTE: The application must also include a **waste management plan** containing details such as record keeping, working rules, segregation, packaging, labelling, storage, monitoring and transport of the waste. Refer to attached copy on *Guidelines for waste management application/plan to dispose of unsealed radioactive material*.

Guidelines for waste management application/ plan to dispose of unsealed radioactive material

Under the *Radiation Protection and Control Regulations 2022* no person is permitted to dispose of a radioactive material without first obtaining the approval of the SA Environment Protection Authority (Regulation 65). For unsealed radioactive material the registered occupier of the premises in which the radioactive material is kept or handled is responsible for making the application (Regulation 66).

A useful document which should be read in conjunction with these guidelines is the *Code for the Disposal of Radioactive Waste by the User*[1] (ARPANSA 2018) and the *Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards 2014: General Safety Requirements Part 3*[2]*.* To expedite the processing of disposal applications by the EPA this *Code* should be followed wherever possible.

1 General

Under Regulation 66 an application may relate to the disposal of a variety of unsealed radioactive material on more than one occasion extending over a period of up to 12 months or longer as approved by the Minister from the date of approval (five-year maximum approval period).

The application must be in writing and contain:

- details of the radioactive material to be disposed of including their chemical and physical form
- the maximum activity of the radioactive material likely to be disposed of, and the arrangements to prevent the maximum activities being exceeded
- details of the disposal place(s)
- the time period (date range) for which approval is sought.
- 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) to whom it is proposed will handle the radioactive material 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:

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1 https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpsc-6

2 https://www-pub.iaea.org/mtcd/publications/pdf/pub1578_web-57265295.pdf

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 disposal exceeding the maximum activity of the radioactive material as indicated in the plan.

6 Consider in detail (on a laboratory-to-laboratory basis) for inclusion in the application:

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