

Government of India
Atomic Energy Regulatory Board
Niyamak Bhavan, Anushaktinagar, Mumbai 400 094

MONTHLY RECORD OF RADIOACTIVE WASTES DISPOSED / TRANSFERRED

[To be maintained under Rule 7 & Rule 15 (2) of GSR-125 Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987 by the authorised institution]

1. Address of the Institution :
2. Waste disposal authorisation No. :
3. Total activity of each radionuclide procured during the month :
4. Brief description of the work in which radioisotopes were used, with (initial) activities of each of the radionuclides employed :
5. Residual activity of each radionuclide in stock at the end of the month :
6. Particulars of unsealed radioactive waste disposed of locally by the institution itself (or transferred to another agency) during the month :

Waste Form	General description of waste and its chemical characteristics	Method of conditioning (if any) prior to disposal	Volume (m ³) after conditioning (post dilution, after incineration, etc.)	Radionuclides present and their activities in the waste		Mode of disposal (Address of agency, to be stated in case of transfer of waste)	Date(s) of disposal or transfer	Total activity disposed during the month (MBq)	Packaging/container employed for transfer of waste to the waste management agency, if applicable
				Radio-nuclide	Activity (MBq)				
1	2	3	4	5	6	7	8	9	10
Solid Waste									
Liquid Waste									
Gaseous Waste									

Note : Attach an up-to-date plan/sketch of the radioactive waste disposal site, showing the location(s) of the disposals and nature of environment upto a radial distance of 200m around the site.

7. Addresses of the agencies :

(a) from whom the sources were procured :

(b) to whom the decayed sources were transferred for disposal :

8. Particulars of decayed/ spent radioactive sources transferred to the supplier (or above mentioned agency) for disposal during the month :

Sr.No	Make and model of the equipment in which the sealed source was used	Radionuclide present in the sealed source	Date when the source was procured and its activity		Source description (e.g. capsule, rod, wire, tube, pellets, spheres etc.)	Date and residual activity at the time of shipment for disposal		Description of packaging/ container in which the source was shipped for disposal	Date of acquisition of new replacement source
			Date	Activity (TBq)		Date	Activity (TBq)		
1	2	3	4	5	6	7	8	9	10

9. Details of periodical environmental monitoring and radiation surveillance conducted during the month of :
 [To be conducted upto a radial distance of 200m around the disposal sites, if more than 20 GBq (540 mCi) of waste was disposed of locally in the previous one year]

Particulars of sampling	Nature of samples analysed (which recorded maximum activity concentration)			
	Ground water sample	Soil sample	Air sample	Any other sample (Give details)
Date(s) of sampling				
Locations of sampling *				
Depth(s) from ground level (for water and soil samples) or height from ground level (for air samples)				
Activity concentration (Bq/ml) (i) Monthly average (ii) Monthly maximum				
Remarks				

* Mark the location of sampling points and dates of sampling in a sketch and attach it with this Form for record (see footnote on page 1).

Name and Signature
of the Authorised Person
(Applicant)

Name and Signature
of the Radiological
Safety Officer

Name and Signature
of the AERB Inspector

Date :

Date :

Date :

10. Observations and remarks of the AERB inspector :

Name and Signature
of the AERB Inspector

Date :

Name and Signature
of the Authorised Person
(Applicant)

Date :

Name and Signature
of the R.S.O.

Date :

GUIDANCE MATERIAL FOR FILLING UP FORM III-A (R1) AND MAINTAINING MONTHLY RECORD OF
RADIOACTIVE WASTES DISPOSED/ TRANSFERRED

A. Filling up of Form III-A(R1)

1. Waste particulars and chemical characteristics shall include the following information :
 - i) for solid wastes – material constituting the waste e.g. paper, glass, plastics, metallic parts of the equipment, solidified waste products. Mention the type of chemicals they contain or are contaminated with e.g. organic/ inorganic, flammable, combustible, pyrophoric etc.
 - ii) for liquid wastes – solids present (whether dissolved or suspended), pH (acidity, alkalinity), organic, inorganic, flammable etc.
 - iii) for gaseous wastes – ventilation exhaust air, noble gases, vapour, particulates etc.
2. Conditioning of waste shall include the treatment given to the waste to bring it in the disposable state/ form :
 - i) for solid wastes – compaction, incineration, fixation in solidifying agents etc.
 - ii) for liquid wastes – pH adjustment, filtration, dilution, chemical/ biological/ ion exchange treatment, evaporation, solidification, etc.
 - iii) for gaseous wastes – dilution by air, filtration, adsorption, decay, cryogenic retention etc.
3. Packaging/ container shall include the following information :
 - i) for solid wastes – containment material e.g. polythene/ PVC/ canvas bags. Packaging e.g. cardboard/ wooden boxes or MS drums, etc.
 - ii) for liquid wastes – underground sumps, tanks, carboys, bottles etc.
 - iii) for gaseous wastes – hold up tanks, delaying pipe lengths etc., if present.
 - iv) for sealed sources – description of the transport container or operational container, e.g. radiography camera, used for shipment of the source to the disposal agency.
4. The information on radionuclides should state the disposed activity of each of the nuclides present. It shall also include concentration of alpha emitters, if present in the waste. Corrections shall be applied, for radioactive decay due to interim storage of the waste, to estimate the residual activities actually released in the environment and the same recorded in the form.
5. The information on mode of disposal/ transfer shall also include prominent or built-in safety features, if any, for shielding and for avoiding loss of material/ activity to the surroundings. Full address of the agency, to which the waste is transferred, should be written, when applicable.
6. Location of disposal site shall include information regarding the identification of (i) burial pits, (ii) release point into sewerage/ soak pit, (iii) air exhaust/ discharge point etc., indicating the distances from a reference point e.g. the location of the radioisotope laboratory.

B. Environmental Surveillance

The details of routine environmental surveillance are to be maintained as per the table shown on page 3 of Form-III A (R1). However, the summary of the records is to be submitted to the competent authority in Form-IV A (R1) only if the activity disposed locally exceeds 20 GBq (540 mCi) in one year.

C. Maintenance of Records

- 1) This form is prescribed for maintaining records of disposal/ transfer of radioactive waste or sources by the Institution. Additional copies of the form may be made by the Institution to meet its long term requirements.
- 2) One form shall be filled at the end of each month and kept in the office of the applicant named in the authorisation issued by Chairman, AERB. All forms of waste disposal records should be kept together for easy reference.
- 3) A sketch/plan of the environment around the waste disposal site(s) shall be kept alongwith the records and updated in case of any changes in the same.
- 4) These records shall be presented to AERB's authorised official(s) for regulatory inspection as and when required.
- 5) In case the activities/ concentrations exceed the limits specified in the authorisation, the Head of the Institution shall intimate Chairman, AERB forthwith (within 5 days) in the format given below :
 - i) Name of the Institution :
 - ii) AERB Authorisation No. :
 - iii) Date of event :
 - iv) Nature of event :
 - v) Causes leading to the event :
 - vi) Corrective measures to prevent recurrence :
- 6) Annual summary of waste disposal operations and transfer of sources shall be submitted to Chairman, AERB in the prescribed Form-IV A (R1) at the end of each year.

