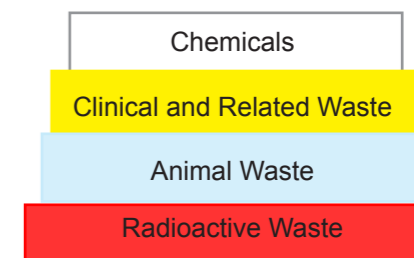


Moreton Bay Research Station
Environmental Management System (EMS)
Guide to Laboratory Waste Disposal



Are the contents of the waste known?

No

Refer to EMS Manual or talk to your Supervisor or MBRS Manager.

EMS Manuals are located in each MBRS Laboratory, in the Library and online at www.uq.edu.au/sustainability/moreton-bay-research-station

Yes

Is the chemical or waste dangerous to handle in its current state?

Consider:

1. Will it react violently if in contact with air, water or moisture?
2. Will it explode/react if dropped?
3. Is the current packaging damaged?

Yes

There is no defined procedure for these types of waste. Each waste must be addressed on an individual basis.

- ◆ Refer to: <http://hazsafety.pf.uq.edu.au/chemwaste/index.html> and/or
- ◆ Consult MSDS information for this chemical waste.
- ◆ Follow MSDS directions for correct disposal of waste.
- ◆ In addition to any other information given in MSDS, waste must also be handled as follows:
 - 1 Packaging labelled with appropriate dangerous goods diamond.
 - 2 Contents and concentration listed.
 - 3 Name of person and generating department listed.

For further information, email Chemical Store Manager at chem-waste@uq.edu.au.

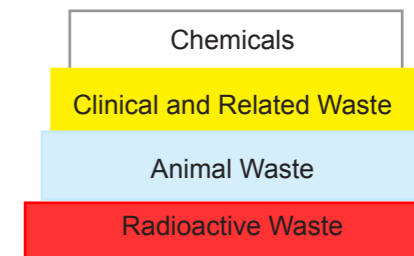
No

Select from one of the waste categories on Page 2:

- ◆ Chemical Waste
- ◆ Clinical and Related (Pathological) Waste
- ◆ Animal Waste
- ◆ Radioactive Waste.

For General Waste and Recycling procedures - refer to website above.

**Moreton Bay Research Station
Environmental Management System (EMS)
Laboratory Waste and Water Disposal Guides**



Waste Streams

**Chemical
Waste**

Any waste of a chemical nature that has the potential to pose a chemical threat to health, safety and/or the environment, or is chemically hazardous.

Scope:

- ◆ Sewerable chemicals
- ◆ Inert solids
- ◆ Collection of non-sewerable liquid wastes
- ◆ Collection of non-sewerable solid wastes
- ◆ Labelling chemical wastes
- ◆ Waste Manifests
- ◆ Collection procedures
- ◆ Common wastes in the work area.

**Clinical and Related
Waste**

Waste of an infectious or contaminated nature. Pathological substances are substances that act as a source, host or carrier of disease.

Scope:

- ◆ Clinical wastes
- ◆ Any disposable laboratory consumables that may have been contaminated by Clinical wastes
- ◆ Sharps
- ◆ Pharmaceuticals
- ◆ Fixed tissue and histology sections
- ◆ Animal carcasses and cage linings only if they are infectious or contaminated
- ◆ Infectious or contaminated faeces.

Animal Waste

Waste of a biological nature, which has the potential to cause harm by acting as pathological waste, while undergoing decomposition.

Scope:

- ◆ Animal carcasses, limbs and tissue that are not infectious or contaminated.
- ◆ Used animal litter and foodstuffs that are not infectious or contaminated.
- ◆ Faeces that is not infectious or contaminated.

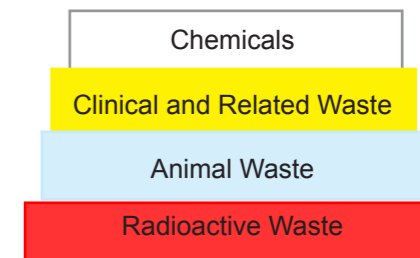
**Radioactive
Waste**

Wastes which because of their radioactive content may require specific management arrangement.

Scope:

- ◆ Solvent-based liquid scintillants
- ◆ Water-based liquid scintillants
- ◆ Radioactive glass and vials
- ◆ Dry materials (including contaminated clothing)
- ◆ Chemical reagents.

Moreton Bay Research Station
Environmental Management System (EMS)
Guide to Laboratory Waste Disposal



Chemical Waste

Liquid Chemical Waste

No liquid chemical waste is to be disposed of to sewer at Moreton Bay Research Station

Solid Chemical Waste

- ◆ Email University Chemical Store to request containers at chemwaste@uq.edu.au.
- ◆ Check container has appropriate label printed and attached.
- ◆ Ensure only one 'individually generated' waste is placed in each container.
- ◆ **Print in pencil** on the label:
 1. Concentration of each ingredient.
 2. Generator's name, phone number and school/centre.
 3. Storage and handling obligations.
 4. Date.
- ◆ Chemical waste containers must be removed from Moreton Bay Research Station for disposal at the University's Chemical Store or other appropriate disposal location.

- ◆ Waste must be sealed in an appropriate and suitable container (refer to MSDS).
- ◆ The container should be labelled with:
 1. Concentration of each ingredient.
 2. Generator's name, phone number and school/centre.
 3. Storage and handling obligations.
 4. Date.
- ◆ Chemical waste containers must be removed from Moreton Bay Research Station for disposal at the University's Chemical Store or other appropriate disposal location.

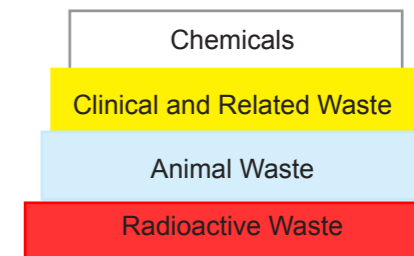
Disposal of Chemical Wastes

USERS MUST REMOVE ALL CHEMICAL WASTE FROM ISLAND.

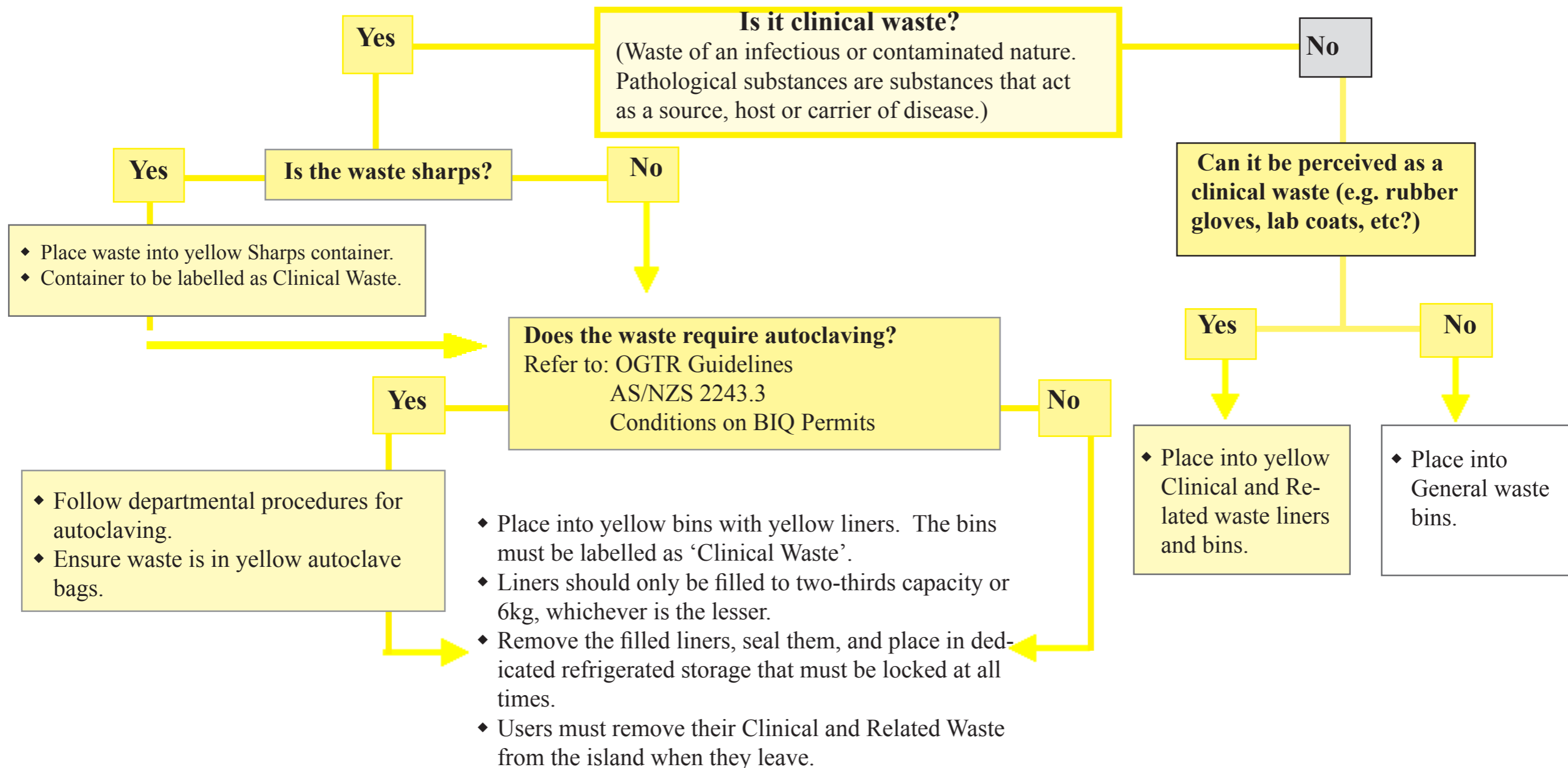
It must be transported in the following manner:

- ◆ Chemical wastes must be held in appropriate containers and appropriately labelled.
- ◆ The total volume of chemical waste being transported must not exceed 250kg.
- ◆ Chemical wastes must be segregated as required by AS2243.10
- ◆ Any vehicle used to transport the waste must be a University owned and marked vehicle.
- ◆ Any vehicle used to transport the waste must carry sufficient equipment to clean up any spill as a result of an accident or spill.

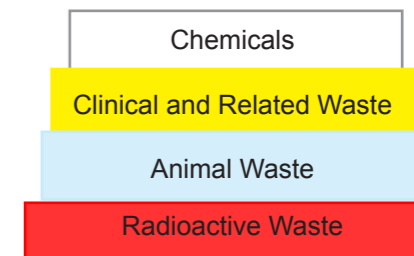
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Clinical and Related Wastes



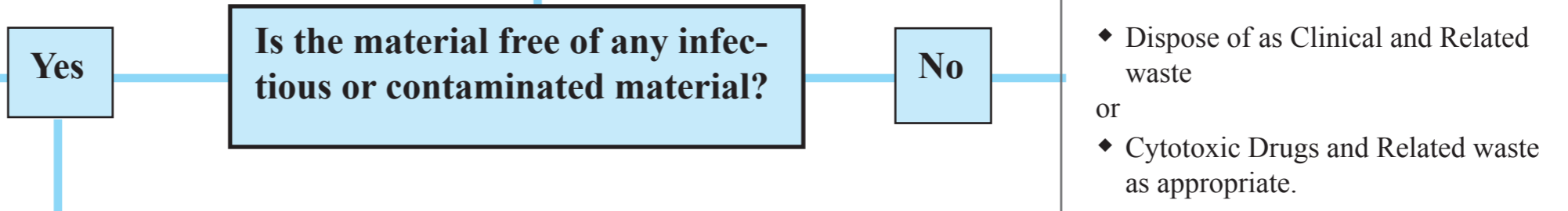
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Environmental Management System (EMS)
Guide to Laboratory Waste Disposal



Animal Waste

Transporters of Animal Waste

- ◆ When generating Animal waste away from the MBRS site, the following must be adhered to:
- ◆ The waste shall be transported directly to MBRS from the source of generation.
- ◆ If the travel time to MBRS is less than 4 hours, the waste shall be kept well insulated.
- ◆ If the travel time to MBRS exceeds 4 hours, the waste shall be kept chilled.



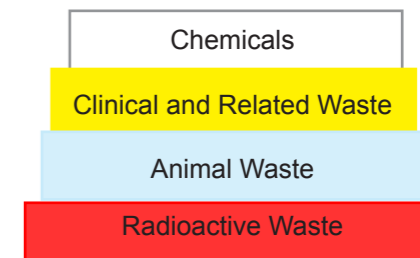
Collection

- ◆ All animal waste will be placed and sealed in a plastic bag. The bag may be of any type, but shall not be coloured red, yellow or purple (as these indicate waste of a hazardous nature).
- ◆ To minimise the use of plastic bags, as much animal waste as possible should be placed in the same bag from any given laboratory work.
- ◆ The bag shall be placed into a closable container marked as “**Animal Waste**” within a freezer. The container must be in sound condition and closed.
- ◆ The container shall be placed in a dedicated area for animal waste.
- ◆ The container shall not be placed in a freezer used for storage of food for human consumption.

Disposal

- ◆ All animal waste shall be placed in a general waste bin on the day of collection.

Moreton Bay Research Station
Environmental Management System (EMS)
Guide to Laboratory Waste Disposal



Radioactive Waste

Note: all radioactive stock solutions and waste must be removed from the research station following use.

Transportation to and from Moreton Bay Research Station

- ◆ All radioactive materials must be transported in compliance with the Code of Practice for Safe Transport of Radioactive Materials (2008).
- ◆ If materials exceed the prescription levels for radioactive substances then users will need to hold licences for **transport** in addition to **use**.

Researchers from the University of Queensland must return all radioactive materials to their St Lucia (or other campus) laboratory facilities for any additional treatment or storage prior to disposal in accordance with the requirements of the following:

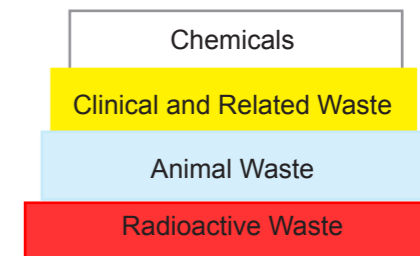
- ◆ EMS Radioactive Waste Operating Procedure
- ◆ OHS Unit's Guideline for Management of Unsealed Radioactive Wastes.

- ◆ **Researchers from other institutions** must return radioactive sources and wastes to their own institutions or make arrangements for disposal or storage with a University of Queensland School or Centre with appropriate facilities.

Disposal of Packaging Material

- ◆ Before discarding old containers or packages that formerly contained radioactive materials, it is essential that any radiation labels be removed or effectively obliterated by the user so that unnecessary alarm is not caused.

Moreton Bay Research Station
Environmental Management System (EMS)
Guide to Freshwater and Saltwater Disposal



Freshwater Disposal

Water supplied from any of the following sources are town water (freshwater) supply:

- All taps (except for plastic taps in labs)
- Showers, toilets and other ablution systems

Freshwater can be disposed of through stormwater, infiltration and sewage.

Saltwater Disposal

Saltwater which is drawn directly from Moreton Bay is supplied in two laboratory areas in one of two ways:

- Plastic tap fixtures over sinks
- Dedicated piping systems to aquariums and other plant and equipment

No chemicals to be disposed of through the saltwater system.

STORMWATER

All waters disposed of external to the building (eg. concreted apron at the rear of the research station) discharges to the stormwater system.

All stormwater discharges to Moreton Bay. No chemicals (used in research programs) are to be flushed, poured or in any way discharged to the stormwater system.

Washing of vehicles (boats and cars) where possible, should exclude the use of detergents, etc. (Refer to Boating and Vehicle operations for further detail.)

INFILTRATION

Infiltration occurs through soils and exposed land where stormwater is taken into the soil. This water may break through and flow to Moreton Bay or enter the groundwater system.

No waters, except clean stormwater (ie. rainfall straight from rooves) or water used for maintaining the landscaping, shall be discharged to any landscaped areas.

Saltwater must be disposed of in one of three ways:

- Specially marked sinks
- Specially marked floor wastes
- By the saltwater circulation system for the aquariums

Any discharges of saltwater from the Moreton Bay Research Station must adhere to the Saltwater Environmental Goals. Please refer to the Environmental Management System (EMS) Manual Section 10B for further details.

If the saltwater does not meet these requirements should be disposed of through the chemical waste system.