
GENERIC HOSPITAL

WASTE MANAGEMENT PLAN

Mission Statement

The Generic Hospital is committed to maintaining a waste management system that is safe, efficient, cost effective and considers environmental issues.

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SECTION 1 - Introduction

This Waste Management Plan describes the current policies and procedures for Generic Hospital. It provides goals & target to ensure ongoing improvements in all aspects of waste management, including the generation, handling, storage and disposal of all forms of waste. This facility is committed to minimising waste, in accordance with the NSW Government Waste Reduction and Purchasing Policy.

This plan is based on the NSW Health Department A Waste Management Guidelines for Health Care Facilities - August 1998", A Infection Control Policy (95/13), relevant legislation relating to Environmental Protection, and Occupational Health & Safety. As legislation and policies are constantly revised, this plan should be reviewed annually.

To be effective, this plan must be widely promoted throughout the hospital.

1.1 Aims

- # To protect public health and safety.
- # To provide a safe work environment
- # To minimise the environmental impact of waste generation treatment & disposal.
- # Reduce waste handling & disposal volumes/costs without compromising health care.

1.2 Objectives

- # To adopt and implement the Waste Management Plan throughout the hospital.
- # To monitor performance and review the Waste Management Plan at least annually.
- # Adopt a waste minimisation policy which incorporates realistic purchasing guidelines.
- # Develop concise waste segregation principles and promote practical guidelines for re-usable products.
- # Foster commitment from all staff and management to actively participate in waste avoidance, reduction, reuse and recycling programs.
- # Introduce a continuing waste management education program for all staff to increase awareness of Occupational Health & Safety issues and waste minimisation principles.
- # Adopt policies and procedures to minimise the environmental impact of waste treatment and disposal.

SECTION 2 – Definitions

Hospital Waste can be divided into seven broad categories which are defined in the NSW Health Department's A Waste Management Guidelines for Health Care Facilities (1998). Clinical, cytotoxic, pharmaceutical, chemical and radioactive wastes are classified as Hazardous wastes under Part 3, Schedule 1 of the Waste Regulation and section 3 of the Waste Guidelines.

2.1 Clinical waste

Clinical waste is waste which has the potential to cause sharps injury, infection or offence. When packaged and disposed of appropriately, there is virtually no public health significance. Clinical waste contains the following:

- X sharps;*
- ☐ human tissue (excluding hair, teeth and nails);
- ☐ bulk body fluids and blood;**
- ☐ visibly blood stained body fluids and visibly blood stained disposable material and equipment;
- ☐ laboratory specimens and cultures;
- ☐ animal tissues, carcasses or other waste arising from laboratory investigation or for medical or veterinary research.

unless treated to standards approved by the Director General of NSW Health.

*Sharps: Any object capable of inflicting a penetrating injury, which may or may not be contaminated with blood and/or body substances. This includes needles and any other sharp objects or instruments designed to perform penetrating procedures.

** Bulk: Free flowing liquids normally contained within a disposable vessel or tubing, not capable of being safely drained to the sewer.

2.2 Cytotoxic Waste

Cytotoxic waste means material contaminated with residues or preparations containing materials toxic to cells, principally through action on cell reproduction. This includes any residual cytotoxic drug, and any discarded material associated with the preparation or administration of cytotoxic drugs.

2.3 Pharmaceutical Waste

Consists of pharmaceuticals or other chemical substances specified in the Poisons List under the Poisons and Therapeutic Goods Act 1966. Pharmaceutical substances include expired or discarded pharmaceuticals, filters or other materials contaminated by pharmaceutical products.

2.4 Chemical Waste

Chemical waste is generated from the use of chemicals in medical applications, domestic services, maintenance, laboratories, during sterilisation processes and research. It includes mercury, cyanide, azide, formalin, and glutaraldehyde, which are subject to special disposal requirements. Chemical wastes included in the Dangerous Goods Regulations and Poisons and Therapeutic Goods Act are also included in this stream.

2.5 Radioactive Waste

Radioactive waste is material contaminated with radioactive substances which arises from medical or research use of radionuclides. It is produced, for example, during nuclear medicine, radio immunoassay and bacteriological procedures, and may be in a solid liquid or gaseous form and includes the body waste of patients under treatment. Reference should be made to the *Radiation Control Act 1990* and the *Radiation Control Regulation 1993*.

Radioactive waste, once lead shielded and allowed to decay to a safe level as set by the Regulatory authority, is no longer deemed to be radioactive waste. Certain radioactive wastes are classified as hazardous waste in the Waste Regulation.

2.6 Recyclable Products

Items which are composed of materials or components, capable of being remanufactured or reused. Items are considered recyclable if facilities are available to collect and reprocess them.

2.7 Organic Products

This includes wood, garden waste, food and vegetable scraps and natural fibrous material which are biodegradable.

2.8 Liquid Waste

Liquid wastes are defined in the Waste Regulation. These wastes include grease trap waste, used lubricating oil and waste normally discharged to the sewer.

2.9 General Waste

Any waste not included above. Which is not capable of being composted, recycled, reprocessed or re-used. This stream includes incontinence pads, sanitary waste and disposable nappies.

SECTION 3 - Organisational Issues

(Please add or delete anything which does / does not apply to your hospital)

Generic Hospital serves Generic and surrounding areas

The hospital has a total of [type in the number of beds] beds comprising -

- [how many] Medical
- [how many] Surgical
- [how many] Intensive care
- [how many] Obstetrics
- [how many] Geriatric/Long stay
- [how many] Paediatric
- [how many] Psychiatric
- [how many] Accident & Emergency
- [how many] Acute
- [how many] Other

Occupied Bed Days: [insert here]

Total Staff: [insert here]

The Manager of the Hospital: [insert name]

Deputy Manager [insert name]

3.1 Employer's Legal responsibilities

Employers have a number of legal responsibilities which include:

- # developing and maintaining a safe work environment and safe work practices (Occupational Health & Safety Act, 1983);
- # ensuring hospital activities do not breach environmental standards prescribed in the State and Federal legislation;
- # providing staff training and education for the safe handling of waste.

Refer to the legislation list in Appendix 1.

3.2 Employees Responsibilities

Employees also have responsibilities which include:

- # complying with safety instructions and use safe work practices for their own protection and for the protection other staff and the public (Occupational Health & Safety Act, 1983).
- # Actively supporting environmental initiatives introduced by the Waste Management Committee.
- # Be aware and comply with the requirements for the handling of chemical substances according to Material Safety Data Sheets (MSDS).

Refer to Legislation list in Appendix 1.

3.3 Licensing Requirements

[A license is required under the Waste Minimisation and Management Regulation where a 'YES' answer is recorded for any of the following].

Generic Hospital generates more than 2 tonnes of clinical (Hazardous) waste per year YES NO

Generic Hospital stores more than 500kg of clinical (Hazardous) waste at any one time YES NO

Generic Hospital transports more than 40 kg clinical (Hazardous) waste YES NO

Generic Hospital is licensed as a treatment facility YES NO

Generic Hospital requires a license YES NO

A copy of the License is held by [.....] License No. Renewal date:/...../.....

3.4 Waste Management Committee

(Example only - membership need not include, or be limited to the following. The functions of the waste management committee can be performed by an existing committee for small hospitals (eg. Infection control or OH&S committees) providing at least one member has waste management experience.)

3.4.1 Terms of Reference

The Committee may co-opt any other relevant personnel to address specific issues.

Nominated Waste Management Coordinator/chairperson *[insert name]*

Meeting Frequency *[insert here]*

Table 1: Waste Management Committee Members

Position	Name	Contact Number	Responsibility
Secretary			Minute keeping.
Infection control			Advise on infection control issues. Liaison with the infection control committee.
Occupational health & safety officer			Advise on OH&S matters. Liaison with OH&S Committee.
Purchasing officer			Report on product usage/ wastage & other supply issues. Liaison with product evaluation committee.
Engineer/ Maintenance			Advise on structural and maintenance issues relating to the storage, treatment & disposal of waste. Monitor water and energy usage.
Domestic services			Supervision of yardsman & cleaning staff . Maintain daily records of waste generation.
Management			Financial and administrative support
Staff development			Provide orientation training for new staff, and arrange in-service training for all relevant staff
Nursing representative			Advise on nursing matters
Environmental Health Officer			Liaison with Council. Advise on disposal issues and services external to the hospital. Independent Audits of the hospital.

Table 2: Objectives of the Waste Management Committee

[Examples only. Please add or delete anything which does / does not apply to your hospital. Please replace XX with the target set for the hospital.]

Committee Objectives	Name/Position	*Completion
Seek a commitment from Management to comply with all relevant Legislation (Appendix 2)		
Consult with Management on waste handling & storage issues relating to the design and layout of buildings, renovations & extensions		
Conduct a waste audit and prepare a comprehensive report of current waste generation, segregation, handling, storage and disposal practices and costs		3 months
Develop OH&S strategies for injury prevention, and for reporting, treating and follow up of injuries associated with waste handling		
Provide appropriate Personal Protective equipment and offer staff vaccinations		
Develop spill management strategies for all waste categories		3 months - review annually
Implement an ongoing waste management training program which caters for all staff including management.		
Implement a waste avoidance & minimisation program incorporating the Waste Reduction & Purchasing Policy [WRAOO – refer to Table 3]		6 months
Implement a Recycling program and increase recycling by at least XX% in the first year (Table 4)		12 months
Promote waste management principles throughout hospital (signs, posters, notice boards, bulletins, competitions etc)		1 month
Improve waste segregation practices (increase compliance by XX% in the first year (Tables 5, 6 & 7)		12 months
Liaise with council, private waste contractors and Area Health Services with regard to the transport and disposal of waste external to the hospital.		
Conduct a Waste Management Numerical Profile Audit annually and review the Waste management Plan		12 months
Conduct ongoing audits of waste (refer Section 4.1). Ensure information is relayed to staff		Ongoing

3.5 Purchasing Policy

[This is an example. If you have your own policy, please insert it here].

Philosophy

Both the Supply/Purchasing Department and the Product Evaluation Committee are committed to waste avoidance and waste minimisation. Where the use of disposable products is unavoidable, their environmental impact should be assessed. In addition to infection control, occupational health & safety, value for money, and environmental concerns will be taken into consideration when evaluating products. Existing research and evaluation information from other hospitals/Areas will also be considered.

Preference shall be given to products and packaging which are:-

- # manufactured from recycled raw materials (provided they are cost/performance competitive)*
- # manufactured from renewable resources
- # re-usable (particularly non clinical products)
- # totally or partially recyclable or with recyclable components, eg toner cartridges, provided however that collection & recycling facilities are available.

* Where recycled products are rejected due to inferior performance, the manufacturer or supplier shall be provided with adequate feedback, and encouraged to improve the quality, performance and reliability of the product.

Where appropriate, tender documents shall require manufacturers, suppliers and distributors to :

- # correctly specify the materials used (MSDS), their origin, the recommended method of disposal/re-use/recycling, and the likely impact on the environment.
- # avoid the use of materials known to be toxic to the environment including chlorofluorocarbon (CFC) products and/or byproducts, phosphates and heavy metals.
- # keep packaging to the minimum necessary for the safe transport and delivery of the product.
- # specify whether packaging is recycled, recyclable, re-usable or biodegradable.
- # accept return of used packaging.
- # clearly specify the energy rating on appropriate appliances and fittings.

Where appropriate and cost effective, re-usable items should be purchased in preference to non re-usable items. Items which are intended for re-use should be able to withstand the appropriate cleaning, disinfection or sterilisation process. Products should be supplied with detailed manuals outlining cleaning procedures.

When comparing re-usable items with non-re-usable items, a life cycle analysis should be conducted and should include (but not be limited to):-

- # product cost
- # product lifecycle analysis
- # labour
- # transport
- # cleaning
- # energy (gas electricity etc)
- # water
- # disposal
- # maintenance

Table 3: Product Evaluation

..... Date:...../...../19.....

{ Add or delete as appropriate}*

Product	In Contract Y/N	Cost Centre/ Department	Quantity/ Year	Cost/ Year	Recycled %	% Capable of using recycled or recyclable components	Recyclable	Disposable	Reusable Alternative Available	
							Market Available? Y/N	Bio-degradable %	Y/N	Cost \$*
Photocopy paper						NA			NA	NA
Office communication paper						NA			NA	NA
Office stationary						NA			NA	NA
Computer paper						NA			NA	NA
Photocopiers										
Printers										
Facsimile										
Toner Cartridges						NA			NA	NA
Printer Ribbons						NA			NA	NA
*Soil amenders						NA			NA	NA

Product	In Contract Y/N	Cost Centre/ Department	Quantity/ Year	Cost/ Year	Recycled %	% Capable of using recycled or recyclable components	Recyclable	Disposable	Reusable Alternative Available	
							Market Available? Y/N	Bio-degradable %	Y/N	Cost \$*
*Soil mixes						NA			NA	NA
*Mulches						NA			NA	NA
*Concrete used in road & path construction						NA			NA	NA
*Concrete used in Buidling construction						NA			NA	NA
*Concrete drainage materials						NA			NA	NA
Other										

3.6 Education and Training

Generic hospital has compiled an education package covering the knowledge and application of the core principals for waste management.

The person responsible for coordinating and running training activities is: [insert name] Position: [insert position] (This person may be internal or external eg Public Health Unit). Orientation courses for new employees and refresher courses are to be run whenever there is a change in process, and / or at least annually.

A register of course attendances is held by: [insert name] Position: [insert position]

Generic hospital has compiled an education plan for this facility that incorporates sessions to:

- # Senior management
- # Current Employees
- # New Employees (orientation)

The following topics are to be covered by all staff:

- # Safe work practices
- # Staff awareness of policies at orientation
- # Legislation & licensing
- # Provision and safe use of PPE
- # Infection Control and Hygiene procedures
- # Waste stream definitions
- # Costs and benefits of waste minimisation
- # Reduce/reuse/recycle
- # First aid / needlestick injury
- # Spill management
- # Manual handling
- # Environmental impacts of waste disposal

A publicity campaign has been designed to reinforce the principals of the waste management plan ie:

- | | | |
|---|--------------------------|--------|
| # | posters | YES NO |
| # | brochures | YES NO |
| # | notice boards | YES NO |
| # | with pay slips | YES NO |
| # | phone "on hold messages" | YES NO |
| # | newsletters | YES NO |
| # | waste awareness days | YES NO |
| # | competitions | YES NO |
| # | email message | YES NO |

References:

South West Sydney Area Health Services, 1994, *SEE: Better Waste Management*
 Medical Safework Video, The safe handling of biomedical waste, A safety training module.

SECTION 4- Waste Management Strategies

4.1 Waste Minimisation

4.1.1 Waste Avoidance

Avoidance initiatives introduced last year: *{insert details here}*

New Avoidance initiatives proposed this year: *{insert details here}*

4.1.2 Reuse Strategy

Generic Hospital does not re-use single use items that have penetrated the skin

Reuse initiatives introduced last year: *[insert details here]*

New Reuse initiatives proposed this year: *[insert details here]*

Methods of cleaning/disinfection/sterilisation: *[insert details here]* eg. steam, dry heat, low temperature, gamma radiation)

4.1.3 Waste Reduction

Waste reduction initiative introduced last year: *(insert details here)*

New Waste Reduction initiatives proposed this year: *(insert details here)*

4.1.4 Recycling

Recycling initiatives introduced last year: *(insert details here)*

New Recycling initiatives proposed this year: *(insert details here)*

The following Table 4 refers to the recycling program.

Table 4: Recycling

Date:...../...../19.....

Product	Quantity Per Year Kg	Collection		Storage Location	Recycler	Removal Frequency	Income (where applicable)
		Where	Frequency				
Office Paper							
Magazines & newsprint							
Packaging & cardboard							
Telephone directories							
Toner cartridges							
Printer ribbons							
Aluminium							
Glass							
PET bottles							
Steel cans							
Mercury/ amalgams							
Lead							
X Ray film							
Silver (from X Ray)							
Batteries							
Others							

4.2 Audits

Auditing is an essential management tool for measuring the level of compliance with the Waste Management Guidelines. Audits can also identify opportunities for water and energy conservation. The audit comprises four components:

	Conducted	Proposed
1. Waste Management Numerical Profile	Date [...../...../.....]	[...../...../.....]
2. Segregation audit	Date [...../...../.....]	[...../...../.....]
3. Energy audit.	Date [...../...../.....]	[...../...../.....]
4. Water audit.	Date [...../...../.....]	[...../...../.....]

{Environmental Health Officers from your Public Health Unit can assist with waste segregation audits upon written request to the Director of the Public Health Unit.}

4.2.1 Waste Management Numerical Profile Audit

The Waste Management Numerical profile audit is currently under review and once revised will be supplied to all Health Care Facilities.

4.2.2 Segregation Audit

Both clinical waste and general waste should be inspected to accurately determine the level of segregation. Other categories of waste and recyclable materials can also be audited (except hazardous, cytotoxic and radioactive waste).

4.2.2.1 Requirements

The Audit should be carried out in a well ventilated, well-lit area with smooth, impervious floors. A stainless steel table or suitable platform such as a mortuary table with elevated sides to retain liquids should be used to sort waste. Hand washing facilities should be available.

Staff performing the audit should wear adequate personal protective equipment AND should be adequately vaccinated (including Hepatitis B). A note taker will be required to record and take photographs if necessary. Photographs or video recordings can be valuable in illustrating and highlighting problem areas.

Ensure that the origin of the waste is clearly identified by name (ie theatre, Ward name) or by numbering, colour coding, or bar coding. The date collected should also be clearly marked on the containers.

4.2.2.2 Equipment

- # Scales suitable for weighing all waste.
- # A supply of suitable containers to receive waste and recyclables once segregated.
- # Knife or scalpel for opening bags.
- # Long handled tongs or tweezers for removing items of waste.
- # Supply of sodium hypochlorite bleach (4%) with mop and bucket.
- # Thick rubber gauntlet gloves, mask, apron, face shield and waterproof boots.
- # Thick plastic sheeting to line table surface.

4.2.2.3 Procedure

If waste volumes are small, it may be possible to inspect all bags/containers, however where this is not practical, a minimum of 10% of all bags should be selected at random for inspection. If one day's waste is to be inspected, ensure that additional waste from previous days are not included (eg. Monday may include weekend's waste) and note whether the day selected is representative.

First record the weight of each bag/container on the audit form (attached). Carefully open the bag and place each item into the appropriate category (Clinical, General or Recyclable - refer to the attached guide to the classification of waste). Re-weigh each category and record the results on the audit form. Total each column and calculate the percentage of Clinical waste, general waste and recyclable material.

Note: If recyclable items are identified in the clinical waste, they should not be removed for recycling if visibly contaminated with blood or body fluids.

Table 5: Waste Classifications for Waste Segregation Audit

Note:- This list is not all inclusive. The table acknowledges the existence of disposable items, but does not endorse their use.

Clinical	Domestic	Recyclable
Bandages & dressings contaminated with blood	Food scraps AND disposable food containers	Glass
Blood stained gloves	Gloves (NOT stained with blood)	Paper
Blood stained disposable surgical hardware	Disposable food utensils	Aluminium (cans, foil etc)
Used needles & syringes	Flowers (if not compostable)	Cardboard
Used drainage & suction containers (full/empty)	Plastic bottles (non-recyclable)	Steel cans
Theatre gowns soiled with blood	Disused office supplies	Milk cartons
Bulk blood & body fluids (not capable of safe disposal to the sewer)	Personal items	PET (polyethylene Tetrachloride) Plastic bottles
Treated Pathology waste (used culture plates/tubes etc)	Un-used medical supplies	HDPE (High Density Poly-Ethylene) Plastic bottles * [2]
Blood stained disposable bed liners	Bed liners (not visibly blood stained)	Cooking oils & fats
Blood stained disposable napkins/ incontinence pads	Disposable napkins (NOT visibly blood stained)	Polypropylene bottles *[5]
	Oxygen masks & tubing (clean)	X-ray film
	Bed pan covers (clean)	
	Sterile wraps	
	Dressing / Treatment trays	
	Paper tissues & hand towel	
	Wrappings	
	Drained IV bags & tubing	

Key: A*≅ denotes recycling symbol.

Table 6: Waste Audit Form

GENERAL /CLINICAL WASTE (circle appropriate type)

Date:...../...../19.....

Waste Origin Eg. Path lab, Maternity	Total Weight (kg)	Clinical		General		Recyclable		Comments (a) Clinical (b) General (c) Recyclable
		Weight	%	Weight	%	Weight	%	
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
TOTAL								

AUDITOR:.....RECORDER:.....

Table 7: Data Analysis from Waste Audit



Waste	Daily Volume (kg)	Estimated Annual Volume (kg)	Average Volume/ Bed Day	Average Volume/ Staff	Cost/kg
Clinical					
General					
Recyclable					

4.2.3 Energy Audit

[The Australian Healthcare Association and The Greenhouse Challenge have produced a Healthcare Workbook titled “Managing Energy for Profits” which sets targets for reducing greenhouse gas emissions. Further details on how to conduct energy audits and become more energy efficient can be obtained from the Australian Healthcare Association at PO Box 54, Deakin West , ACT, 2600 or { www.aha.asn.au }, Phone 02 6285 1488 or Fax 02 6282 2395]

4.2.4 Water Audit

Refer to the hospital engineer and/or water supply authority regarding development of water audit procedures.

SECTION 5 - Waste Handling, Containment and Transport

Generic hospital has an adequately trained team responsible for the handling, internal transport, spill management and disposal of clinical and related wastes.

5.1 Review

The Waste Management Committee review of the collection process including manual handling and transportation is due on .../.../19.....

The review to include the following areas:

- # transport via least sensitive routes;
- # collection process and frequency;
- # handling;
- # placement of mobile garbage bins, bags and containers;
- # location of waste storage area;
- # contractor collection points.

5.2 Waste Handling

Sharps are handled in accordance with the Infection Control Policy Circular 95/13.	YES NO
Manual handling is in accordance with the National Code of Practice for Manual Handling	YES NO
Hand washing and hand care is in accordance with the Infection Control Policy Circular 95/13	YES NO
Management of Needlestick Injuries is in accordance with Departmental Circular 98/11.	YES NO

Table 8: Clinical Waste

Date:/..../.....

Department (eg. Theatre)	Location (eg. Panroom)	Container Type (eg. Bag, MGB)	Collection Frequency/Time	Collection by Whom	Storage location

Sharps Containers

Generic hospital provides purpose designed sharps containers to ensure a safe system of work. The Committee have determined the size, design and location, based on the risks associated with each invasive procedure.

- Sharps container/s used [insert type, brand etc]
- Size/s [insert the sizes used and where]
- The containers are collected by (if contractor) [insert details]
- The containers are disinfected by (if reusable) [insert details]
- Containers are not overfilled YES NO
- Containers comply with Australian Standards YES NO
- Kept out of childrens reach (ie minimum 1.4m above floor) YES NO
- Labelled with hospital, date & ward YES NO
- Sealed before removal YES NO

Table 9: Sharps Containers

Date:/...../.....

Department (eg. Theatre)	Location (eg. Panroom)	Collection Frequency/Time	Collection by Whom	Storage location

Table 10: General Waste

Date:/...../.....

Department (eg. Theatre)	Location (eg. Panroom)	Collection Frequency/Time	Collection by Whom	Storage location

5.3 Waste Bags

Bags are not overfilled YES NO
 Bags are held away from the body when being handled YES NO
 Bags are sealed at the point of generation/collection YES NO
 The bag closures used are: *[insert details here]*
 The waste collection times are: *[insert details here]*
 Waste bags are free of heavy metals (inorganic dyes) YES NO

5.4 Waste Trolleys & Mobile Garbage Bins (MGBs)

Are the trolleys used exclusively for waste transport? YES NO
 Are trolleys lidded, leakproof and made of rigid material? YES NO
 Trolleys are not overfilled YES NO
 Do MGBs have lockable lids YES NO
 Are the trolleys and MGBs colour coded and labelled in accordance with Appendix 4
 Cleaning frequency: *[insert details here]*

The following procedures are followed when cleaning trolleys and MGBs:

- # Thoroughly scrub trolleys and MGBs with pH neutral detergent
- # Clean or flush completely with bleach
- # Trolleys and MGBs should be left to dry
- # Cleaned trolleys and bins are to be stored separately from soiled containers
- # Wear appropriate personal protective equipment
- # Waste water must not be discharged to storm water or other system systems designed to carry unpolluted water.

5.5 Tracking

All waste bags, MGB=s and sharps containers are labelled with the hospital, ward and date
 The labelling method used: [insert details here]
 The person responsible for tracking is: [insert name]

5.6 Holding Areas

Clinical waste is stored in an enclosed structure with lockable door and smooth impervious floor. YES/NO
 Approximate duration of storage: [insert details here]
 “First in first out” policy YES NO
 Water supply available..... YES NO
 Suitable drainage provided (specify eg. sewer, septic tank) [insert details here]
 Permanent natural ventilation provided YES NO
 Adequate lighting provided..... YES NO
 Are spill kits located in the holding area..... YES NO
 Where are the spill kits located:: [insert locations here]
 Who holds the keys for the holding area: [insert name here]
 If an enclosed structure is not available, where is the location of holding area [insert location here]
 Holding Area not accessible to the public: YES NO
 Is the holding are enclosed by a fence or other barrier YES NO
 Radioactive wastes with short half-lives are stored on the premises until radioactivity is undetected.
 Separate radiation storage room? YES NO
 Radioactive storage bin provided..... YES NO
 Is a collection tank provided for liquid waste YES NO

5.7 Personal Protective Equipment (PPE)

The following protective barriers are available or accessible:
 eye shields YES NO specify:
 gloves YES NO specify:
 gowns YES NO specify:
 masks YES NO specify:
 aprons YES NO specify:
 footwear YES NO specify:

The PPE worn when handling waste the following types of waste are:
 General:
 Clinical:
 Cytotoxic:
 Radioactive:
 Sharps:

5.8 Spill Management

[Please insert your protocol for Spill Management for Hazardous Chemicals or other commonly used substances. Add or delete anything which does / does not apply to your hospital.]

5.8.1 Spill Kits

The person responsible for maintaining the kits is [insert name here]
 Commercially available kits supplied? YES NO
 What is the name of the Company: [insert name here]
 Spill kits for clinical waste are maintained in the following areas: [insert details here]
 Spill kits for cytotoxic waste are maintained in the following areas: [insert details here]
 Spills kits for mercury spills are maintained in the following areas: [insert details here]
 A recommended equipment list for spill's kits is located in Appendix 3.

5.8.2 Management of Blood or body substance spills

Spot Cleaning

- # Put on disposable gloves
- # Wipe up spot immediately with a damp cloth, alcohol, or paper towel may be used.
- # Discard contaminated materials in Clinical waste bag.
- # Wash hands thoroughly.

Other spills

- # Collect appropriate spill kit from designated location
- # Wear disposable gloves, eyewear, mask and apron
- # Remove the bulk of the blood and body substances with absorbent material
- # Use pan and scraper to scoop up absorbent materials and unabsorbed blood or body substances
- # Discard Clinical materials in Clinical waste bag for disposal
- # Wash hands thoroughly
- # Mop the area with a detergent solution
- # Wipe the site with disposable towels soaked in a solution of 1% (10,000 ppm) available chlorine.
- # Clean and disinfect pan, scraper, mop and bucket
- # Re-usable eyewear and apron should be cleaned and disinfected after use
- # Replace any used items and return the spill kit to the designated location

If a spill occurs on a carpeted area, mop up as much of the spill as possible using disposable towels then clean with a detergent. Arrange for the carpet to be shampooed as soon as possible. (Circular 95/13).

5.8.3 Cytotoxic Spills

- # Collect cytotoxic spill kit from designated location
- # Put out a sign to notify of potential hazard.
- # Wear appropriate PPE as outlined in WorkCover guidelines.
- # Double glove with latex inner and heavy duty outer gloves
- # Lay absorbent towels or mats over the spill
- # Scrape up any broken glass and absorbent materials and place in cytotoxic waste bag
- # Mop the area with warm water and detergent
- # Remove shoe covers, outer gloves, disposable overalls, mask and goggles and place in waste bag/container
- # Seal waste bag and place in cytotoxic waste bin or have it collected in the usual manner.
- # Replace any used items and return the spill kit to the designated location

5.8.4 Formaldehyde Spills

- # Shut off all sources of ignition
- # Ventilate area as much as possible
- # Collect Clinical waste spills kit from designated area
- # Wear goggles or face shield for spills or leaks where concentrations of formaldehyde in air are great enough to cause eye irritation.
- # For higher concentrations wear an approved supplied air helmet or self contained breathing apparatus with full face piece.
- # If leak or spill is small, dilute with plenty of water and run to waste
- # For large spills, absorb in a suitable material (dry sand, earth, vermiculite) and dispose as approved by local Council
- # Mop or wipe over spill area with warm water and detergent
- # Replace any used items and return the spill kit to the designated location

5.8.5 Glutaraldehyde Spills

- # Ventilate area as much as possible
- # Collect Glutaraldehyde spill kit from designated area
- # Wear goggles or face shield
- # Dilute with plenty of water and run to waste
- # Mop or wipe over spill area with warm water and detergent
- # Replace any used items and return the spill kit to the designated location

5.8.6 Mercury Spills

- # Ventilate area of spill
- # Collect mercury spills kit from designated area
- # Wear impervious disposable gloves
- # Pick up droplets using a pasteur pipette, eye dropper or suction bottle

- # Store the waste in an unbreakable lidded container, preferably under a solution of sodium thiosulphate (photographic fixer).
- # Decontaminate the area by sprinkling sulphur powder over the spill area. The volume of powder used should be at least twice the volume of the spill.
- # Mix well by a brush, where possible
- # Allow about half an hour for the formation of mercuric sulphide
- # Sweep up the sulphur using the dustpan and brush, avoid generating dust
- # Dispose of the dust in an impervious sealed container
- # Seal and discard all cleaning equipment
- # Replace any used items and return the spill kit to the designated location

For spills on carpeted area, follow the first five steps described above. For decontamination, the carpet has to be removed. Once the carpet is removed the decontamination procedures can be followed.

5.9 Transport

Transportation complies with the EPA's *Special conditions applicable to the transportation of trade waste being contaminated wastes generated in hospitals, health institutions and medical laboratories.*

All of Generic Hospital's Transporters and Contractors are outlined in Table 11 .

5.9.1 Community Health

Clinical Waste is not transported in the drivers compartment:	YES	NO
Waste Containers:		YES NO
Rigid and leakproof		YES NO
Secure fitting lids		YES NO
Securely mounted in the vehicle		YES NO
Cleaned regularly		YES NO
Clearly labelled		YES NO
Vehicles are always locked when unattended		YES NO
Vehicles carry a suitable spill kit		YES NO

Table 11: Transporters and Contractors

.....Date:...../...../19.....

Waste Type	Name of Contractor and/or Transporter	Address	Contact Phone	Trade Waste License No	Destination
Clinical					
General					
Sharps					
Cytotoxic					
Grease Trap					
Hazardous					
Pharmaceutical					

SECTION 6 - Waste Treatment and Disposal

Generic Hospital is responsible for its waste from generation to final disposal (Cradle to grave”). For this reason, documentation is kept on the date of disposal, the amount of waste disposed, where the waste is disposed and the contractors and transporters.

Table 12: Chemicals, Pesticides & Pharmaceuticals

Date:...../...../19.....

Chemical, Pesticide Pharmaceutical	Use	MSDS Available Yes/No	Storage Location	Disposal Method (I.e. sewer, landfill, incinerator etc)	Quantity & Frequency	Trade Waste License & Contractor receipt

Table 13: Radioactive Waste

Date:...../...../19.....

Radioactive Material	Half Life	Storage Location	Storage Duration	Disposal Method	
				Where	How and By Whom

6.1 Radioactive Waste Disposal

The safe handling and disposal of radioactive materials is regulated by the NSW Radiation Control Act, 1990, and the Radiation Control Regulation, 1993. The current guideline being used by Generic Hospital is the NH&MRC *Code of practice for the disposal of radioactive wastes by the user*.

Is the facility licensed by the Environment Protection Authority YES NO
 License Number: [insert number here]
 Radiation Safety Officer: [insert name here]
 Are any radioactive gases discharged? YES NO
 Who maintains the system? [insert name here]
 Are detailed records of disposal kept - covering the type of radionuclides, estimated activity, physical nature of material, date disposed and method of disposal YES NO

6.2 Disposal of Clinical Waste in Isolated Rural Areas

Is the landfill licensed by the EPA to receive clinical waste YES NO
 Is the waste covered immediately YES NO
 Does the public have access to this part of the waste facility YES NO
 Is the hospital given any written acknowledgment of receipt YES NO
 Does the hospital keep records of amount and date of disposal YES NO
 Do hospital staff supervise the disposal YES NO

6.3 Disposal of Products of Conception and Non-viable Foetuses

How are products of conception disposed: [insert details here] YES NO
 Are parents permitted to take these products home YES NO
 If yes, how are these products disinfected: [insert details here]
 How are these products packaged: [insert details here]
 Does the cemetery provide memorial services burial of these products: YES NO
 Do any Funeral Directors participate in the provision of a memorial service YES NO
 If yes, which ones: [insert details here]

6.4 Radiography Wastewater

A silver recovery unit is installed: YES NO
 If YES the Silver recovery unit is serviced by: {insert name}
 If NO used fixer and developer is removed by: {insert name}
 Waste is managed in accordance with the PURE Code of Practice (Appendix 1) YES NO
 Trade waste agreement with sewage authority {provide details}

Table 14: Treatment and Disposal

..... Date: / / ...

Waste Type	Treatment		Disposal		Trade Waste Agreement/License No.
	Method	Contractor	Method	Contractor	
General Waste					
Clinical Waste					
Sharps					
Pathology Waste					

Table 15: Waste Management - Annual Report

Date:...../...../19.....

Waste	Quantity/Annum (litres or kgs)	Handling Costs (Container cleaning, replacement etc)	Transport Costs	Treatment Costs	Disposal Costs	Total Cost
General Waste						
Clinical Waste						
Sharps						
Radioactive						
Cytotoxic						
Chemical Waste						

Any problems experienced?

SECTION 7: Occupational Health and Safety

The Hospital's copy of the Occupational Health and Safety Act 1983 & Regulations is available at: [insert details here] (describe location)

Copies of the provisions of sections 23, 24, 25, 26 & 31 of the Occupational Health & Safety Act are displayed in the following locations:[insert locations here]

An Accident/Incident Register is kept in [insert details here](describe location), and is maintained by [insert details here]

All waste handling injuries and incidents are investigated by [insert details here](Name & Position) immediately they are reported. Preventive action will be initiated as soon as practical and a report submitted to the Occupational Health and Safety Committee.

Waste handlers are represented on the Occupational Health and Safety Committee by

[insert details here](name)

[insert details here](position)

All staff who handle waste and recyclable materials:

- # Receive accredited training in basic infection control, personal hygiene, safe handling techniques, correct use of Personal Protective Equipment, spill management procedures and the requirements of the Occupational Health and Safety Act 1983
- # Are issued with appropriate Person Protective Equipment and compelled to wear it while handling waste.
- # Are issued with a comprehensive statement of duties and standard operating procedures manual.
- # Have access to equipment and facilities which minimise manual handling and promote personal hygiene.
- # Have access to and are familiar with Material Safety Data Sheets (MSDS) for all chemicals used.
- # Are aware of the requirements of the Infection Control Policy (95/13)
- # Are offered appropriate vaccination as summarised in Table 16.

Table 16: Waste Handling Staff Immunisation:

Date:...../...../19.....

(Please add or delete any immunisation relevant to your hospital)

Name	Employee's Title	Training Completed		Immunisation Up to Date	
		YES	NO	Hep B	Y / N
				Tetanus	Y / N
				Hep A	Y / N
				Other	
		YES	NO	Hep B	Y / N
				Tetanus	Y / N
				Hep A	Y / N
				Other	
		YES	NO	Hep B	Y / N
				Tetanus	Y / N
				Hep A	Y / N
				Other	
		YES	NO	Hep B	Y / N
				Tetanus	Y / N
				Hep A	Y / N
				Other	
		YES	NO	Hep B	Y / N
				Tetanus	Y / N
				Hep A	Y / N
				Other	

SECTION 8: Bibliography & Acknowledgments

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Appendix 1: Legislation

Health care establishments need to observe all public and occupational requirements. Compliance with standards set for the ambient environment as well as for effluent and emission limits, (NHMRC; 1995).

The following list of legislation may be applicable to most Hospitals.

Protection of the Environment Operations Act 1997
 Dangerous Goods Act 1975
 Dental Technicians Registration Act 1975 & Regulations
 Environmentally Hazardous Chemicals Act 1985
 Environmental Offences and Penalties Act 1989.
 Local Government Act 1993 & Regulations
 Medical Practices Act 1992 & Regulations
 Nurses Act 1991 & Regulations
 NSW Occupational Health and Safety Act 1983, Regulations and Associated Legislation
 Public Health Act 1991
 Radiation Control Act 1990
 Water Board Act 1987
 Waste Minimisation and Management Act 1995

Guidelines:-

- # NHMRC, 1995 (draft), National Guidelines for the management of Clinical and related wastes.
- # Sedgwick, 1995, Minimum Standards and Guidelines for Waste Management, NSW Health Department
- # EPA, 1991, Special conditions applicable to the Transportation of Trade Waste being Contaminated Wastes generated in Hospitals, Health Institutions and Medical Laboratories.
- # EPA, 1991, Special Conditions Applicable to the Storage of Trade Wastes being Contaminated Wastes Generated in Hospitals, Health Institutions and Medical Laboratories.
- # NHMRC, 1985, Code of Practice for the Disposal of Radioactive Wastes by the User, Australian Government Publishing Service, Canberra.
- # NHMRC, 1996, Infection Control In the Health Care Setting, Australian Government Publishing Service, Canberra.
- # Photographic Uniform Regulations for the Environment (PURE), 1997, Code of Practice for Liquid Waste Management & Disposal (Photographic, Graphic Art and X-Rays).

Australian Standards:-

- X AS/NZS 3816:1998. Management of clinical and related wastes.
- X AS/NZS 4261 - 1994. Reusable sharps containers for collection of sharp items used in human, and animal medical applications.
- X AS 4031 - 1992. Non-reusable containers for the collection of sharp medical items used in health care areas.
- X AS 1251-1 1982. Polyethylene (polythene) Garbage Bags - Low Density. Withdrawn

NSW Health Department Circulars:-

- X 95/49 30 June 1995 Guidelines and Competencies for the handling of cytotoxic drugs and related waste in NSW Health Care Establishments.
- X 95/49 30 June 1995 Guidelines for handling cytotoxic drugs and related waste in health care establishments. 95/13 30 June 1995 NSW Health Infection Control Policy 88/192 21 September 1988. Guide to Incineration. Contaminated Waste Incinerator Specification Guidelines.
- X 98/11 2 February 1998. Management if health care workers potentially exposed to HIV, hepatitis B and hepatitis C.

Appendix 2: Needle Stick and Blood or Body Fluid Exposure

This is an example of a needlestick policy. If you have your own policy, please insert it here]

Staff Instructions - Needlestick injury and Blood or Body fluid exposure

Immediate Action

a) Penetrating injury/needlestick injury

- # Induce bleeding by gently squeezing
- # Wash promptly and thoroughly with soap and water

b) Mucosal Splash

- # Rinse copiously with water
- # If eyes are Clinical rinse while open with tap water or saline
- # If blood gets in the mouth, spit out and rinse with water and spit out again. Repeat several times.

Report incident to Supervisor or out of hours Nursing Supervisor. Please complete incident form and WorkCover notification form. Return form to your Supervisor immediately. (WorkCover notification form has to be posted to WorkCover within 7 days)

Report to Accident/Emergency

It is important to report to Accident/Emergency in the first instance so that the RMO can make an assessment of exposure. This then determines whether you need to be prescribed the drug AZT Zidovudine.

For initial and/or subsequent blood screening you have the option of attending

- # Accident/Emergency Department
- # A Sexual Health Clinic
- # General Practitioner.

When you are assessed by the RMO on duty, he/she will carry out the following:

- # First Aid treatment if required
- # Assess the significance of blood/body fluid exposure
- # Assess your Hepatitis B vaccination status
- # Counsel you regarding a number of issues concerning Hepatitis B/C, HIV
- # Obtain your consent for blood tests
- # Extract blood for, Hepatitis B antibodies (titre levels), Hepatitis C antibodies, HIV.

Hepatitis B vaccination/immunoglobulin

If you have not been vaccinated against Hepatitis B, the RMO will give an injection of Hepatitis B vaccine, and possibly Hepatitis B immunoglobulin. Hepatitis B follow up vaccination should be carried out by the Staff Immuniser. Results should be collected from Accident/Emergency within 24 hours. If your Hep B results show insufficient antibodies, Hep B immunoglobulin must be administered within 72 hours. If sufficient antibodies are present a Hep B vaccination booster will only be required. A Tetanus injection will be required if not received within the last 5-10 years.

HIV/Hep C results must be collected (in person) from the RMO within 7 days. Results must not be given over the phone.

Follow-up blood tests (after 1st initial blood test)

You will need further blood tests for

- # Hepatitis B 3 months after injury (titre levels)
- # Hepatitis C 3 months after injury, then 6 months
- # HIV 3 months after injury, then 6 months

Counselling Services Available

Generic Hospital, contact the Infection Control Sister OR Needle Stick Hotline 1800 804 823

Appendix 3: Spill's Kits

[Some of these kits are commercially available or can be made up by your hospital]

Clinical Waste Spill kit could contain:

- # broom
- # mop and mop bucket
- # a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- # 2 plastic general waste garbage bags for the disposal of any general waste;
- # 2 Clinical waste bags for the disposal of Clinical waste;
- # a pan and scraper;
- # 5 granular disinfectant sachets containing 10,000 ppm available chlorine or equivalent;
- # disposable rubber gloves suitable for cleaning
- # detergent
- # disposable cloths and sponges
- # disposable overalls
- # heavy duty gloves suitable for handling Clinical waste
- # eye protection
- # a plastic apron
- # a mask (for protection against inhalation of powder from disinfectants, or aerosols generated from the spills).
- # incident report form
- # waste spill sign

The Cytotoxic spill kit consists of:




- # mop and mop bucket
- # a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- # 2 cytotoxic waste bags for the disposal of cytotoxic waste
- # 2 pairs of disposable hooded overalls
- # shoe covers
- # long heavy duty gloves
- # latex gloves
- # a mask (for protection against inhalation of powder from disinfectants, or aerosols generated from the spills).
- # splash goggles
- # absorbent toweling / absorbent spill mat
- # incident report reform
- # waste spill sign
- # 5 granular disinfectant sachets containing 10,000 ppm available chlorine or equivalent;
- # a pan and scraper.

The Mercury spill's kit consists of:

- # 2 unbreakable lidded containers
- # spill sign
- # pasteur pipette
- # eye dropper
- # sodium thiosulphate
- # mask (for protection against inhalation of powder or aerosols generated from the spill)
- # dust pan and brush
- # sulphur powder
- # incident form

Appendix 4: Colour Coding

Prescribed Colour and Symbols for waste bags and containers

<i>Type of waste</i>	<i>Colour of bags / Containers</i>	<i>Colour of Letters</i>	<i>Symbols</i>
Clinical	Yellow	Black	
Cytotoxic	Lilac	Violet	
Radioactive	Scarlet	Black	
General Waste	opaque white	no colour	no symbol

Recommended Government Colour Coding for Recycling

NSW Government Colour Coded Recycling System for Workplaces & Public Places	
Aluminium Cans	Yellow
Brown Glass	Brown
White Glass	White
Green Glass	Light Green
Mixed Glass	Red
Compostables	Maroon
Good Quality Paper	Blue
Newspapers, magazines	Green
Plastics (PETE)	Orange