The Writing Safe Work Procedures Guideline (OHS027) should be consulted to assist in the completion of this form.

Safe Work Procedure Title and basic description

Title: Laboratory waste management and disposal
Description: Associated risk assessment title and location: POWCS.ORC.RA A4

Describe the activity or process

A wide variety of waste is generated at the Oncology Research Centre (ORC). This SWP describes an overall policy for the management and disposal of laboratory waste at the ORC. This SWP does not replace other SWPs written to cover specific waste disposal (e.g. PC2 waste).

This SWP sources information contained in the POWH Waste Management Directive (PD 079, May 2006).

This SWP applies to all staff and students of the ORC. The person who generated the waste is ultimately responsible for the safe storage and disposal of that waste. However, as we share bins and storage facilities, a team effort is required to maintain due diligence in the safe storage and disposal of all ORC waste.

Segregation of Waste:
Waste is segregated depending on
(i) The nature of the hazard or the laboratory in which it was generated;
(ii) The potential for dangerous interactions;
(iii) The final disposal option appropriate for the waste.

Various people, including hospital staff, local contractors and specialist industrial waste contractors, undertake removal of the sorted waste from the laboratory. It is therefore the responsibility of ALL ORC staff and students to make sure that ALL waste is segregated properly. This is to ensure that staff collecting waste from the laboratory are not exposed to hazards not normally associated with that form of waste. When in doubt ask someone!

Waste Storage and Disposal:
Careful attention should be given to the containers used for the collection of waste. Only approved waste containers are to be used!

(1) White bins with clear bags are to be used for general waste only. This waste shall not include any biological waste, sharps, chemicals or gloves. In the waste collection area, a large green bin is available for white bag waste.

Hospital cleaners are responsible for the collection of this waste. The exception to this is the PC2 facility where cleaners are not permitted. ORC staff should place bags for collection outside the door of the PC2 laboratory.
Describe the activity or process

(2) **Blue paper recycling bins** are located in the waste collection room. These are for paper only and are separate from general waste bins.

(3) **Orange general recycling bins** are located in the waste collection room. These are for plastic, aluminium, steel and recyclable foam only, not paper! This bin is separate from general waste bins.

(4) **Brown or Red glass recycling bins** are located in the waste collection room. These bins should have a guarded insert in their lids. Any glass that has contained a chemical should be thoroughly rinsed before placement in this bin.

(5) **Yellow contaminated waste bags/yellow bins** are to be used for all biological waste (human/animal specimens), contaminated gloves, non-toxic chemicals, and contaminated plastic ware. These bins are **not to be used for sharps or the disposal of organisms deemed to be genetically modified** by the UNSW Institutional Bio-Safety Committee (IBC) or the Office of the Gene Technology Regulator (OGTR)!

When yellow bags are no more than 3/4 full, bags are sealed with tape, labelled with the date and department name (ORC), and placed in the waste collection room in the designated yellow contaminated waste bin. If the bin in the waste collection room is full bags are **not** to be stored on the floor; they should remain in the laboratory bin until room is available for disposal. **It is a good idea to check if there is room in the main yellow bin before taking waste out of a laboratory bin.** If the bags have split or have holes they are to be double bagged.

(6) **Purple cytotoxic waste bags/bins** are to be used for all cytotoxic waste, contaminated gloves and plastic ware. Cytotoxic waste includes ethidium bromide gels, acrylamide solutions/gels, tissue culture medium containing cytotoxics (G418, Zeocin, Blasticidin) and trypan blue waste. Cytotoxic bins are **not to be used for sharps or the disposal of organisms deemed to be genetically modified** by the UNSW Institutional Bio-Safety Committee (IBC) or the Office of the Gene Technology Regulator (OGTR)!

When cytotoxic laboratory bins are no more than 3/4 full, bags are sealed with tape and placed in the waste collection room in the designated purple waste bin. If the bags have split or have holes they are to be double bagged.

(7) **Yellow (contaminated waste) and Purple (cytotoxic waste) sharps bins** are provided for all glassware and sharps. When full these are sealed with the caps provided, labelled with the date and department name (ORC), and placed in the appropriately coloured bin in the waste collection room.

(8) **White PC2 Biohazard buckets** are provided for the storage of PC2 organisms prior to destructive autoclaving. These contain an autoclave bag into which GMO waste is placed for autoclaving. Read the appropriate SWP for detailed instructions on the disposal of GMO waste. Once autoclaved, the tray containing the waste should be placed under the sink to cool. The cooled waste is then placed in a yellow bin, which if necessary is emptied as described above (see point 5).

(9) **Hazardous chemical waste containers** are provided for the segregation of chemical waste. There are different types. **Do not use Schott bottles for the storage or disposal of waste.** Large (15 L) polypropylene (PP) containers are located at the rear of the main laboratory or in the storeroom while heavy-duty polyethylene (HDPE) bottles (1 L) used for some chemicals are kept in the storeroom.

Pay particular attention to the correct container to use when disposing of different chemical wastes and keep the storage containers small where possible. Unstable, corrosive and organic wastes are particularly dangerous in large quantities!

Separate containers need to be provided for liquid and solid hazardous chemicals. Liquids need to be further segregated into flammables, solvents, acids, alkalis, heavy metals and organic solutions.

Do not let the containers reach more than 75% full before sealing them and placing them at the marked area at the rear of the main laboratory. **All containers are to be labelled clearly and correctly with a CHEM ALERT label.** This should include a re-calculated hazard level if the substance has been diluted. If such a label is not available you will need to write one yourself.
Radioactive Waste - See the OH&S representative prior to commencing this work and generating this waste. Appropriate clearance forms and/or licences may be required.

Other Hazardous Waste - Special arrangements will need to be made for the disposal of specific materials and/or old equipment

Collection Of Stored Chemical Waste
The OH&S representative usually makes arrangements for the collection of chemical waste stored at the rear of the main laboratory. Should the representative be unavailable the following procedure is followed.

Containment integrity MUST be checked prior to removal of the chemicals from the Oncology Research Centre! It is our responsibility to ensure that the waste contractor is not exposed during the disposal.

(i) A Chemical Waste Disposal Request Form MUST be filled in and signed (see form attached). Copies are kept on the outside door of the cupboard under the fume hood.

(ii) The specialist waste disposal contractor is on campus each Thursday. To book a collection:
Labtech
Rick Zeuschner
Mobile: 0419 424 717
Fax: 4575 1104

(i) Place items for disposal into a cardboard box, keeping in mind point 8 above. Keep the box(es) on a trolley near the fume hoods until collection.

(ii) Fax the contractor a request for pick-up including a copy of the waste disposal request form. This must be provided to the contractor so that the appropriate neutralising agents can be used.

(iii) Make sure that you are present to hand over the waste to the contractor. DO NOT leave it lying around in the vestibule. Provide copies of the forms to the contractor and ensure that a copy is kept for departmental records.

Note:
It is important that wherever possible waste minimisation principles are applied. Moreover, waste should not be allowed to build up in a laboratory, which introduces further hazards. It is the duty of ALL staff to empty bins appropriately.

Recycling of used printer/photocopier toner cartridges:
POWH has a facility for the recycling of used toner cartridges. A box will be kept within the department into which these cartridges may be placed when they are removed from the equipment. When the box is full, it should be transported to the High Street Inquiries Desk, where the cartridges can be left for collection. (NB: The box of cartridges should be transported using a trolley; lifting the box onto the trolley may constitute a manual handling risk. Ask for help if necessary.)
List all resources required including plant, chemicals, personal protective clothing and equipment, etc

Before dealing with any chemicals, all MSDS involved has to be consulted. A minimum of a long-sleeve lab-gown, latex glove and covered shoes have to be worn. When required, additional PPE such as face shield and mask should be worn.

List potential hazards and risk controls including specific precautions required

The risks are dependent on the chemical being disposed of. MSDS must be consulted for the proper method of disposal.

List emergency shutdown instructions

List clean up and waste disposal requirements

A general chemical waste clean-up kit is available for any potential spills.

List legislation, standards and codes of practice used in the development of the SWP


Supervisory approval, training, and review

Supervisor: Signature:

Plant custodian: Signature

List competency required – qualifications, certificates, licencing, training - eg course or instruction:

SWP review date: Responsibility for SWP review: