

HS723 Laboratory and Equipment Decommissioning / Project Cessation Procedure

Policy Hierarchy link	Work Health and Safety Act 2011 Work Health and Safety Regulation 2011 Work Health and Safety Policy		
Responsible Officer	Director, UNSW Safety and Sustainability		
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Superseded Documents	HS723 Laboratory Decommissioning/Project Cessation Procedure version 1.2, approved on 30 April 2014		
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Associated Documents	HS704 Laboratory Decommissioning Checklist HS726 Cessation of Laboratory Activities Checklist HS321 Laboratory Hazardous Waste Disposal Guideline HS015 Waste Disposal Form - Biological HS014 Waste Disposal Form - Chemical HS699 Laboratory Clearance Certificate Guideline HS700 Laboratory Clearance Certificate HS601 Radiation Procedure (Ionizing) HS921 Equipment decommissioning Certificate		
Version	Authorised by	Approval Date	Effective Date
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1. Purpose and Scope

This Procedure, with the associated forms and checklists, was developed to help ensure that:

- a. on the vacating of the whole or part of a laboratory, the premises are left in a condition that is safe for any other use; and
- b. Laboratory equipment that is to be disposed of or passed on to another owner has been appropriately cleaned or decontaminated of any possible hazardous substance, and all hazard stickers have been removed.

It is the responsibility of all laboratory workers and supervisors to take the necessary action in order to ensure that appropriate decommissioning has been completed.

2. Definitions

Biological material: any biological agents, substances or material, (whether alive or not) present in or arising from living organisms, that are or may be a hazard to the health or wellbeing of the UNSW community or environment.

Containment facility:

- The laboratory, room, facility or building that has been constructed and furnished to specific Australian Standard (AS/NZS 2243.3) requirements, in order to physically contain microorganisms, animals, plants, insects or biological hazards, in order to protect people and the environment.
- A defined place where research and teaching involving biohazards is undertaken.
- Includes laboratories, animal houses, plant houses, etc.
- Physical Containment Facility Level 1 to Level 4 as described in AS/NZS 2243.3, for handling material of the corresponding Risk Group level.

Decommission: to withdraw equipment or workspaces from service and render them inoperative, to dismantle and decontaminate to make them safe and to remove all warning/hazard information that is no longer relevant.

Decontaminate: to neutralise, remove or make safe dangerous or hazardous substances, such as radioactivity materials, infectious microorganisms, noxious chemicals or poisons from an area, surface, object, or person.

Disinfect: cleanse so as to destroy or prevent the growth of disease-carrying microorganisms.

Double Containment: the transportation of containers of viable microorganisms or hazardous chemicals outside of a laboratory, within a second unbreakable and closed container which can be readily decontaminated.

Drugs Register: a register specifically for Schedule 8 (S8) drugs, which is kept at the place where the drugs are stored or used and which records all transactions relating to S8 Drugs.

GTRC: Gene Technology Research Committee (formerly known as the IBC or Institutional Biosafety Committee).

Hazardous substance: any matter that may pose a biological, chemical or radiation risk to a person if the person comes in contact with the matter or residue of the matter

Laboratory Records: include all Health and Safety related paperwork, such as Chemical Register, Biological Register, Inspection Testing and Monitoring Schedule, Training Plan, Training Register, Training Records, Induction Records, Workplace Inspections Records, Audit Records, Lab Clearance Certificates, Equipment Clearance Certificates and Request to Dispose forms.

Radiation, Ionising: Electromagnetic or particulate radiation capable of producing ion pairs in biological material(s) but does not include electromagnetic radiation of wavelength greater than 100 nanometres. (IAEA, 1994).

Radiation, Non-Ionising: Any electromagnetic radiation of wavelength longer than 100nm in air or vacuum, sound or ultrasound.

Schedule 8 Drugs: also known as drugs of addiction, controlled drugs or S8 drugs. The schedule is maintained by the Pharmaceutical Services Department of NSW Department of Health (PSB). The PSB web site must be consulted for the current list of scheduled drugs.

3. Procedure

Laboratory workers and supervisors must ensure that appropriate decommissioning has been completed whenever all or part of a laboratory has been vacated by a whole group or part of the group or when equipment is being removed from the facility. The following points must be addressed as applicable to ensure that the laboratory is left clean and ready for new occupants, and that equipment is made safe before handover.

3.1 Checklists

3.1.1 HS704 Laboratory decommissioning checklist

This checklist should be used when either:

1. A laboratory is being decommissioned; or
2. A research project has come to an end and the lab will be used for another purpose; or
3. A laboratory is being vacated for refurbishment or extensive maintenance.

The checklist helps identify the actions that need to be taken to ensure that the laboratory is left in a safe, clean and uncontaminated state. If the contents (such as plant, equipment and chemicals) are being moved to a new location or discarded, they must be appropriately decontaminated before leaving the area. The cleaning and decontamination extends to workbenches, cupboards, equipment (including fridges, freezers, incubators, centrifuges, biosafety cabinets, fume hoods etc. See 3.6). It also requires the disposal of any chemicals (or their relocation under agreed arrangements).

3.1.2 HS700 Laboratory Clearance Certificate (if applicable)

If the laboratory is being vacated for the purposes of maintenance or renovation then an additional clearance certificate is required for the purposes of declaring the area safe for maintenance workers. Once the cleaning and decontamination is completed and the checklist in 3.1.1 is signed off, then this additional clearance certificate is completed, signed off by the laboratory supervisor and displayed on the outside of the laboratory door. A copy is kept as a record. See the HS699 [Laboratory Clearance Certificate Guideline](#).

3.1.3 HS726 Cessation of Laboratory Activities Checklist

This checklist should be used when only a part of a laboratory requires vacating such as when students have finished their bench work or in large multi user group labs where one group is leaving.

3.1.4 HS921 Equipment Decommissioning Certificate

If equipment from the laboratory is being removed from the site for whatever reason (eg disposal, being given away), it must be made safe by appropriate decontamination methods and this certificate must be adhered to (or otherwise accompany) the actual item. This is particularly relevant if the equipment itself is hazardous, or for equipment that has been used in relation to hazardous substances, and any warning and hazard signage must be removed once the equipment has been decontaminated.

3.2 Chemicals

All chemicals must be removed from the laboratory or the space being vacated, and either discarded as chemical waste or relocated to another laboratory. The outside of the container may require decontamination beforehand. The agent used to decontaminate depends on the type of contamination but for most chemicals a suitable detergent such as Decon 90 could be used.

3.2.1 Unwanted Chemicals

Unwanted chemicals may be distributed to other laboratories, but only if they are correctly labelled, segregated and appropriately contained during transport to other laboratories with suitable storage. All other unwanted chemicals (except for Schedule 8 Drugs) must be correctly labelled, segregated and disposed of by UNSW's licensed chemical waste contractor in accordance with the following document and forms:

- Disposal of Laboratory Hazardous Waste Procedure
- Waste Disposal Form - Chemical
- Radioactive waste – contact UNSW Health & Safety (x52912)
- Unwanted Schedule 8 drugs – contact UNSW Health & Safety (x52914)

3.2.2 Chemical Areas to be cleaned

Storage: All areas where chemicals have been stored or used, including refrigerators, undersink cupboards, fume hoods, cabinets, shelves and benchtops must be checked for the presence of stored chemicals. Arrangements must be made for the removal of all such chemicals (as above 3.2.1).

Where there is storage outside the laboratory, it may be relevant to clear out and clean these external locations.

All surfaces must be cleaned including the inside of cupboards. Any chemical residues, drips, and spills are to be decontaminated with a suitable material e.g. Decon 90 detergent. Other non aqueous materials will need to be decontaminated with a suitable solvent. The solvent used may be acetone, ethanol, methanol etc depending on the particular chemical contaminant. All non aqueous rinses must be collected and disposed of through the chemical waste contractors.

Any items used in the cleaning process must also be thoroughly cleaned or disposed of through the chemical waste contractors.

Fume Hoods: The fume hood must be decontaminated, left clean, and ready for use.

Bench tops: Any disposable liners/covers are to be removed from the work surface, and all surfaces are to be cleaned.

Refrigerators/Freezers: all refrigerators and freezers must be defrosted, decontaminated and cleaned.

Signage: all hazards signs must be removed from the outside of storage areas, equipment and laboratories once the hazard has been removed and the area decontaminated.

3.3 Compressed Gas Cylinders

Gas cylinders must be disconnected and removed from the laboratory unless the laboratory is to be reused by another laboratory group and that group has requested they remain.

Gas Cylinders can be:

1. Transferred to another laboratory space, using a trolley to which they are secured.
NOTE: gas regulators must be removed before transport.
2. Disposed of by returning them to the external store for collection by the vendor e.g. BOC Gases.

Gas cylinders must remain properly labelled and secured at all times.

3.4 Radioactive Materials

All radioactive material must be relocated either to another approved radiation-laboratory space or to the relevant Radiation Store via the UNSW Health and Safety, as per HS601 [Radiation Procedure \(Ionising\)](#) Contact the UNSW Health and Safety on x52912.

Personal dose monitors: must be sent for checking, and final dose monitoring reports are to be requested from the UNSW Health and Safety, with the results provided to the applicable person.

p³², or ¹²⁵I: If these were used in the laboratory, an appropriate radiation detector must be used to ensure no equipment or surfaces are contaminated. Where contamination is detected, contaminated equipment and surfaces must be removed to the radiation store.

Tritium, ³⁵S or ¹⁴C: If used in the laboratory, swipe tests must be conducted to ensure that no equipment or surfaces are contaminated. Where contamination is detected, every effort must be made to clean and decontaminate equipment, surfaces and crevices. If these efforts are unsuccessful, the UNSW Radiation Safety Officer, must be contacted on x52912 to organise the contaminated material to be removed to the radiation store, at the laboratories expense.

A footprint survey must also be conducted to ensure there has been no contamination external to the laboratory.

The HS601 [Radiation Procedure \(Ionizing\)](#) has information on how to test and decontaminate radiation laboratory areas.

The results of the decontamination survey and cleanup must be recorded and retained by the laboratory manager with a copy sent to the local Radiation Safety Supervisor and/or School Manager.

All radioactive labels must be removed from the work surfaces once decontamination has been confirmed.

3.5 Biological Materials

All biological material must be removed from the laboratory to be decommissioned, and the laboratory left clean and ready for new occupants.

3.5.1 Biological Samples and Infectious Material

All potentially infectious material must be rendered non-viable and disposed of in one of the following methods:

1. Autoclaved: then dispose of into yellow biological waste bins.
2. If the autoclave option is not chosen the waste is double-bagged (autoclave bags) and put into a yellow biowaste bins for collection by the UNSW Bio waste Contractor.
3. Chemically disinfected materials and chemical discards are disposed of as chemical waste.

All sharps are to be placed in puncture resistant sharps containers for disposal by the UNSW Biowaste Contractor. Fluids are not to be discarded into sharps bins as they do not seal. Sharps bins are not autoclaved as the plastic could melt, exposing personnel to sharps hazards.

All surfaces including work surfaces, the outer and inner surfaces of equipment such as water baths, biological safety cabinets and centrifuges, walls, floors, sinks, and storage areas including walk-in coolers, centrifuges, freezers, refrigerators and incubators must be decontaminated with an appropriate disinfectant.

If the laboratory is certified by the Office of Gene Technology Regulators (OGTR), the Gene Technology Research Committee (GTRC) Support Officer must be contacted in order to request a suspension of the certificate. Any

genetically modified material must either be destroyed or removed to another certified facility, as approved by the GTRC

All biological signage must be removed from the doors, equipment and storage areas.

The HEPA filter in any biological safety cabinet must be decontaminated and replaced if required.

3.6 Equipment

All equipment, regardless of whether it is to be disposed of, removed to another laboratory or remain in the laboratory, must be disinfected and or decontaminated with an appropriate substance. An assessment of risk must be conducted before any equipment is decommissioned, dismantled, moved and or disposed of.

All portable equipment, once decontaminated, must be removed from the laboratory, unless the laboratory is to be reused by another laboratory group and that group has requested the equipment remain. An HS921 [Equipment Decommissioning Certificate](#) is to be completed covering each piece of equipment.

3.6.1 HS921 Equipment Decommissioning Certificate

An Equipment Decommissioning Certificate must be completed and attached to any piece of equipment that is to leave the facility. Where there is more than one piece of similar equipment, these could be included on the one certificate but a copy of the certificate must be on each item.

For equipment that is being handed over, given away or on-sold, any equipment maintenance records, including a copy of the decommissioning certificate, must be kept and passed on to the new group when required. See section 3.9 for information on Records.

3.6.2 Archibus Equipment disposal request

In order to arrange the collection of equipment by FM, an Archibus request must be raised using *Bulk Waste Disposal* as the “problem type” and a description of each item to be collected.. A copy of this request must be attached to each piece of equipment to be disposed, along with the HS921 [Equipment Decommissioning Certificate](#).

3.7 Glass

All broken glass should be placed in a rigid, puncture resistant, appropriately labelled container, which is sealed before being disposed of by UNSW’s licensed chemical waste contractor in accordance with the Laboratory Hazardous Waste Disposal Guideline.

Broken glass must be segregated into separate containers (contaminated and uncontaminated) and clearly labelled.

3.8 Signage

Hazard signs must be removed from all doors, equipment, storage areas and other surfaces inside and outside of the laboratory once the hazard has been removed. This must be done prior to the disposal of any equipment and the decommissioning of the laboratory. Signage includes all biosafety, toxic, flammable, corrosive, radiation, PC2 Signs and OGTR certificates.

3.9 Records

If a laboratory is being closed, all laboratory records including those listed below, must be transferred to the School and retained for a period of at least seven

years, or longer, as indicated by the UNSW Recordkeeping Policy and the State Records Act 1998.

If a laboratory is being relocated, all laboratory records must be transferred to the new location, and maintained by the relevant supervisor/ lab manager.

A copy of the signed Laboratory Decommissioning /Project Cessation Checklist and signed Equipment Decommissioning Certificate are to be added to the laboratory records.

If the laboratory is to be refurbished, a Laboratory Clearance Certificate is to be completed and posted on the door of the laboratory certifying that the area is now able to be safely accessed by other personnel and a copy of the certificate is to be retained with the laboratory records.

3.9.1 Health and Safety List of records mentioned in this procedure

The following records may have been required to be filled in during the decontamination process:

- Completed Risk Management Form(s) relating to the decontamination/decommissioning activity
- Waste disposal forms (biological and chemical)
- Equipment maintenance records
- Laboratory Clearance Certificate
- Laboratory Decommissioning / Project Cessation Checklist
- Radiation decontamination survey and clean-up records
- Equipment decommissioning certificate
- Archibus equipment disposal request

4. Review & History

This Procedure is due for review three years from its date of effect.

Appendix A: History

Version	Authorised by	Approval Date	Effective Date	Sections modified
1.0	Director, Human Resources	19 November 2010	19 November 2010	New document
1.1	Director, Human Resources	19 April 2013	19 April 2013	Minor updates and introduction of new form HS726 Updated Branding Logo in accordance with UNSW Branding Guidelines. Modified the document identifier from OHS to HS in accordance with WHS legislation review
1.2	Director, UNSW Safety and Sustainability	30 April 2014	30 April 2014	Reviewed for administrative updates
1.3	Director, UNSW Safety and Sustainability	18 November 2015	18 November 2015	Added emphasis on equipment decommissioning and disposal, addition of new form (HS921) & request to Archibus. General content review.