

Safety Procedures on Vacating Premises

Policy

From time to time Departments, Units and Centres of HKU vacate accommodation as a result of relocation or major refurbishment.

When any accommodation is vacated, the departing staff must ensure that the accommodation is left safe and free from hazards, so that the health and safety of

contractors, staff of Estates Office or other personnel are not put at risk from hazards left behind.

The guidance included in this document is designed to aid those faced with relocation to fulfill their responsibilities in this regard.

Responsibilities

The Department Head must:

- ensure the procedures are implemented
- ensure the checklist is completed before moving.
- sign decommissioning and/or decontamination certificates.

The Safety Office will:

- provide assistance where possible (e.g. disinfection of biological safety cabinets) or necessary (e.g. collection of radioactive materials).
- countersign certificates.
- forward certificates to Estates Office to confirm areas are safe for their work to commence.

Estates Office will:

- inform department of moving date.
- start work only on receipt of decontamination & decommissioning forms.

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Guidance

1. Scope

This procedure should be applied to the vacation of all premises, from single rooms to whole buildings. It is likely to have limited relevance to office-based departments.

A checklist is provided for use by departing staff. Completion of the checklist should enable the Head to sign off the decommissioning and equipment decontamination certificates with confidence.

The checklist can be used for single rooms, suites of rooms or larger areas at the discretion of the appropriate Head. However, as Heads will require confirmation from staff based in those areas affected, they may wish to divide up their areas in line with the responsibilities of subordinate staff.

2. Procedure

The flow chart on the following page indicates how this procedure operates and at what stage action needs to be taken.

Heads should bring this guidance to the attention of those with specific responsibilities for work areas and their contents to ensure that all redundant substances, materials and equipment are disposed of correctly, equipment is decontaminated where required before transfer or disposal, and all necessary notifications are made to the appropriate authorities

The Safety Office is available to assist and should be contacted as soon as practicable after

the decision to vacate the premises has been confirmed.

If you have any questions concerning this guidance please contact the Safety Office for assistance.

3. Disposals and Transfers

Introduction

Under the Waste Disposal regulations HKU has a clear duty of care to ensure that controlled waste is disposed of properly. Biological and chemical waste must be appropriately labelled and packaged. Advice on this can be obtained from the Dangerous Goods Manager of the Safety Office. In some instances surplus chemicals can be distributed to other users and the DG Manager can assist in this regard. The guidance below is specifically for materials and substances, which fall outside of this category.

Please note that there are severe penalties for the disposal of hazardous materials into main drains. Please refer to 'The Management of Chemical Waste' for details and arrangement.

3.1 Chemicals

Chemical compounds are classified according to their physical and biological properties (e.g. very toxic, toxic, corrosive). In disposing of chemicals it is important to take note of any hazardous properties they may have and, where necessary, use appropriate protective measures during handling.

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Aqueous Liquids

Non-hazardous, non-toxic chemicals such as sodium or potassium chloride can be poured down the sink with copious amounts of water.

Toxic soluble salts such as potassium cyanide or sodium azide and **corrosive liquids** such as concentrated acids and alkalis should not be poured into the main drains. They require collection and disposal by a specialist chemical waste contractor.

Organic Solvents

These should be appropriately labelled, collected and disposed of by a specialist chemical waste contractor.

Solids

These should be appropriately labelled for collection and disposal by a specialist chemical waste contractor.

Gases

Cylinders should be collected by the normal supplier.

Carcinogens

Any laboratory which has been using carcinogens should be treated as a special case and the issue referred to the Safety Office for advice.

Controlled Chemicals

Any movement of 'controlled chemicals' subject to licensing requirements with the Customs & Excise should be referred to the Safety Office in the first instance.

3.2 Radioisotopes

The Head, probably through the Departmental Radiation Safety Representative (DRSR) should inform the University Radiation Protection Officer (URPO) of the impending move. The URPO will decide how to proceed to dispose of either sealed or unsealed sources of radioisotopes and advise the DRSR accordingly.

Unsealed Sources

The Safety Office will normally provide advice on how to remove isotopes for storage or decay or how to arrange for their transfer to another facility.

Sealed Sources

The position here is potentially more complicated. The URPO will inform the DRSR on how to remove the sealed source for storage. Normally this will involve removal by a specialist contractor and some financial cost may be involved.

3.3 Biological Agents

The Safety Office should be consulted for specific advice. Samples transferred to other facilities require appropriate packaging and labelling.

Biological material being disposed of should be dealt with as follows:

Non-pathogenic Material

Autoclave then dispose as non-hazardous waste.

Pathogenic Material

Autoclave then dispose as hazardous waste.

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3.4 Animals

All animal remains, feed, faecal material and bedding should be removed. Dirty cages should be decontaminated before disposal

3.5 Contaminated Movable Equipment

Disinfectants such as Virkon and Cetrimide are effective in the sterilisation of equipment which has been used with or contaminated by biological material. It is important to ensure that the disinfectant is used at the correct concentration and that adequate protection such as a laboratory coat, eye protection and the correct type of protective gloves is worn. A decontamination certificate (see penultimate page of procedure) should be issued with each piece of equipment.

3.6 Other Equipment

Fixed equipment may include autoclaves and sterilisers. These will normally be dismantled by competent engineers. However, a risk assessment should be carried out for this task. Always ensure that the engineer is made aware of the risk assessment or has done his or her own risk assessment before work commences. Some liaison may be necessary with water, gas, electricity or other utility companies.

4. Decontamination of Facilities

4.1 Fume Cupboards

Ensure that

- chemicals and apparatus are all removed.
- gas, water supplies & other services provided are switched off.
- the electricity supply is off and isolated.
- surfaces have been cleaned.

- drains are clear of chemical contamination.

A decontamination certificate for the ductwork may be required. Refer to Safety Office if in doubt.

4.2 Biological Safety Cabinets and Cytotoxic Cabinets

Biological safety cabinets and animal cage change stations (cytotoxic cabinets) if remaining *in situ* should have decontamination certificates. If they are being removed for disposal then it is important to ensure that HEPA filters have been removed first (normally by service engineers although this may vary depending upon the service contract). On removal it is important that HEPA filters are disposed of correctly and safely. A decontamination certificate for each cabinet must be issued before it is removed for reuse in another location.

4.3 Radioisotope Handling Facilities

The DSRS will ensure that radioactive sources have been removed. The designated controlled areas (e.g. the radioactive room) may have to be decommissioned and a decommissioning certificate issued to this effect. Supervised areas should be monitored to ensure that they are free from contamination. All equipment should be removed (after decontamination). The URPO should be contacted if long term radioactive contamination is anticipated. Contaminated equipment may have to be stored until a sufficient number of half-lives have passed before it can be safely removed. The URPO should be informed if this is the case. Radioactively contaminated equipment should be cleaned with an appropriate cleaning agent, e.g. Decon. Sinks and drains must be free from radioactive contamination. A decontamination

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certificate should be issued to this effect. Examples of decommissioning and decontamination certificates are shown at the end of this document.

4.4 Containment Facilities

Special areas such as Biological Containment Laboratories will most likely require, in addition to the decontamination of BSCs, the fumigation of the whole facility, unless a risk assessment indicates this is not necessary. The Safety Office should be consulted in such situations.

4.5 Animal Facilities

Responsibility for the removal of animals and the decommissioning of facilities rests with the Head of the Department/Centre/Unit.

Re-housing or transfer of animals

During the transfer of animals precautions must be to ensure that they do not escape. This is particularly important for genetically modified or infected animals. The Head of the Laboratory Animal Unit can provide assistance if required.

No transfer of animals and closure of facilities

The Principal Investigators are responsible for the humane killing of any animals designated to their project. Heads are responsible for the humane killing of animals under their care. The following procedures should be adopted.

- Animal carcasses should be disposed of as clinical waste.
- Housing equipment (e.g. cages, water bottles, trolleys and shelving) should be sterilised.

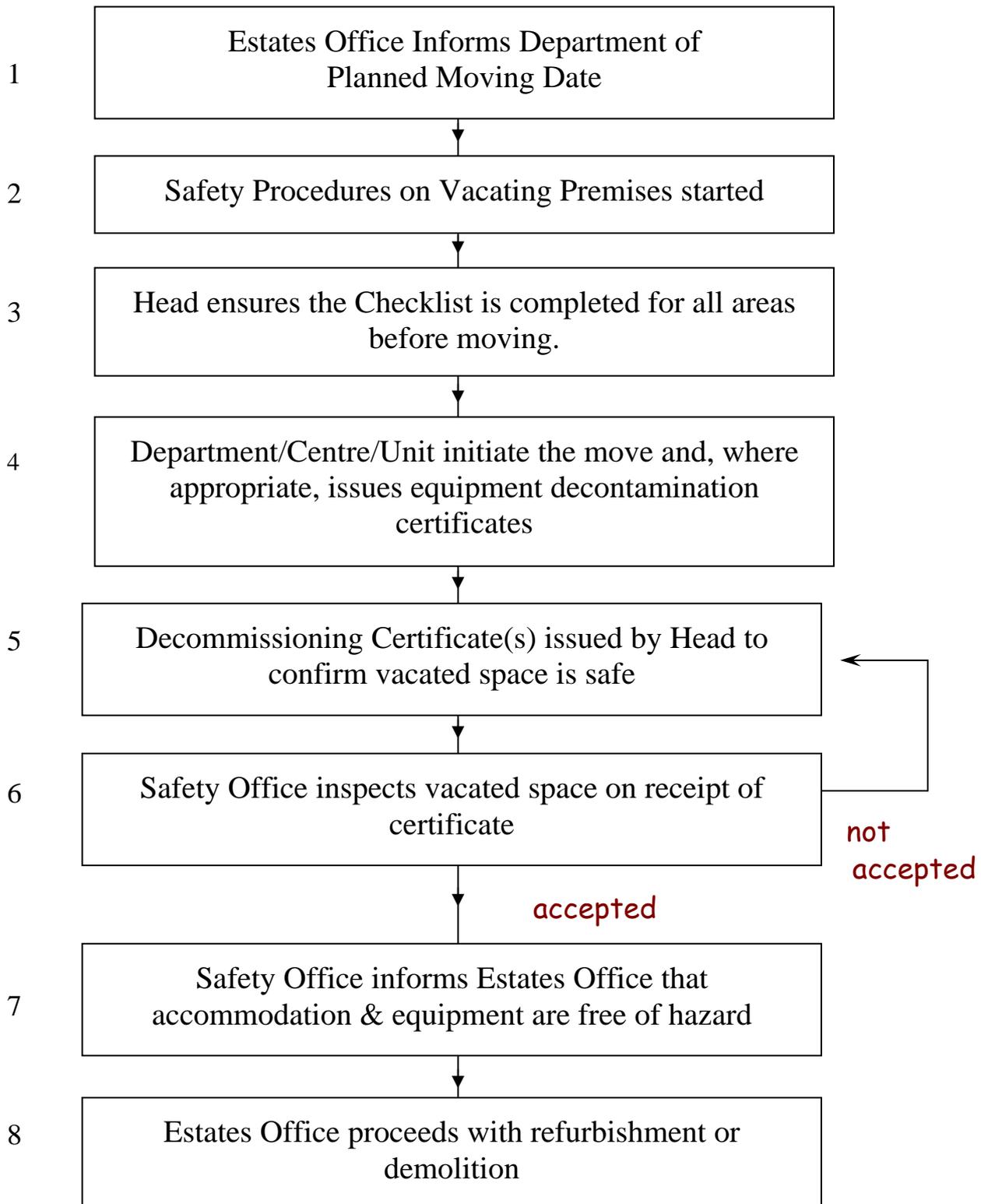
- Floors, walls, doors, sinks, etc. should be washed down with an appropriate disinfecting and cleaning agent (e.g., Trigene, a complex mix of disinfecting agents).
- Rooms if originally designed for fumigation should be fumigated (ventilation closed down and outlets etc. effectively sealed) using formaldehyde vapour. Fumigation should be for 24h duration. Extract fans should clear the fumigant for at least 3h before entry is allowed. Strict standard operating procedures (SOPs) should be followed. Fumigation should not be carried out in rooms not designed for fumigation.
- Disposables from operating theatres and procedural rooms should be sterilised followed by disposal as Biological waste. Biological materials and chemicals such as drugs has been sought should only be disposed of after advice from the Director of Safety.

4.6 General Laboratories

It is good practice to ensure that all equipment has been removed. Unwanted material for removal (by cleaners, etc.) should be clearly labelled. All electrical equipment should be isolated. Refrigerators should be emptied and left in a safe state. Benches should be clear of contamination (chemical, biological, radiological). Once vacated, a copy of the decommissioning certificate should be placed at a prominent point stating that the laboratory is, as far as is reasonably practicable, free from any contamination. This notice should also contain information regarding the status of the utilities (e.g. that power and gas are isolated).

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Flow Diagram Detailing Procedure on Vacating Premises



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Checklist

(for internal departmental use for each room, suite, floor or Department as appropriate)

Location(s)

Tick if applicable **Tick if action is complete**

1. Disposals or Transfers

1.1 Chemicals

- Aqueous liquids
- Organic solvents
- Solids
- Gases
- Carcinogens
- Controlled chemicals

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1.2 Radioisotopes

- Unsealed sources
- Sealed sources

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1.3 Biological Agents

1.4 Animals

1.5 Contaminated Moveable Equipment

1.6 All Other Equipment

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2. Decontamination

2.1 Fume Cupboards

2.2 Biological Safety Cabinets

2.3 Radioisotope Handling Facilities

2.4 Containment Facilities

2.5 Animal Facilities

2.6 Carcinogen Suites

2.7 General Laboratories

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Completed by _____ on _____ (date)

Signature _____ Position _____

Department: _____

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The University of Hong Kong

DECOMMISSIONING CERTIFICATE

It is the responsibility of the Head of the Department, Unit or Centre to ensure that all laboratory areas and rooms vacated are safe from chemical, radiological and/or biological contamination. On a practical basis this task will most likely be delegated to others such as the laboratory manager but the Head of the Department/Unit/Centre must countersign this certificate.

Please complete the sections below and forward to the Safety Office with copy to Estates Office.

| | |
|-----------------------------------|----------------------------|
| Department, Unit or Centre: | |
| Location: | Building: |
| | Floor & Room Number: |

| | |
|--|---------|
| 1. This laboratory area/room/rooms* which was used for chemical, radiological/biological/animal holding* work is now no longer occupied/temporarily vacated for renovation work* by the Department, Unit or Centre | ‡ |
|--|---------|

| | |
|---|---------|
| 2. All chemical, radiological and/or biological* materials have been removed. | ‡ |
|---|---------|

| | |
|---|---------|
| 3. All the facilities in (1) above including fixtures such as sinks/fume cupboards/microbiological safety cabinets/cytotoxic cabinets/benches/animal cage change stations/animal bedding disposal stations* have, been rendered safe. | ‡ |
|---|---------|

| | |
|----------------------|---------|
| 4. Additional notes: | ‡ |
|----------------------|---------|

| | |
|--|---|
| <p>LABORATORY MANAGER (OR EQUIVALENT)</p> <p>NAME</p> <p>SIGNATURE</p> <p>DATE</p> <p>HEAD OF DEPARTMENT /UNIT/CENTRE *</p> <p>NAME</p> <p>SIGNATURE</p> <p>DATE</p> | <p>I AM OF THE OPINION THAT THE LOCATIONS IDENTIFIED ABOVE ARE SAFE TO HANDOVER TO ESTATES OFFICE/CONTRACTORS.</p> <p>DIRECTOR OF SAFETY</p> <p>DR. EDMUND HAU</p> <p>SIGNATURE</p> <p>DATE</p> |
|--|---|

‡ Lab manager (or equivalent) must initial these statements
 * delete as appropriate

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EQUIPMENT DECONTAMINATION CERTIFICATE

It is the responsibility of the Head of the Department, Unit or Centre to ensure that equipment to be left is in a clean and 'safe' condition i.e. free from Microbiological, Chemical and Radiological contamination. On a practical basis this task will most likely be delegated to others such as the laboratory manager but the Head of the Department/Unit/Centre must countersign this certificate.

Please complete the sections below and forward to the Safety Office with copy to Estates Office.

EQUIPMENT WILL NOT BE MOVED UNLESS THIS FORM HAS BEEN SIGNED.

| TYPE OF EQUIPMENT | MANUFACTURER | MODEL NO. | SERVICE NO. or INVOICE NO. |
|-------------------|--------------|-----------|----------------------------|
| | | | |

The equipment described above has been exposed to micro-organisms, clinical material, radioisotopes or hazardous chemicals. YES/NO* ‡

The equipment described above has been exposed to micro-organisms/clinical material/radioisotopes/hazardous chemicals* and appropriate decontamination procedures have been carried out. YES/NO* ‡

Complete decontamination of the equipment described above cannot be achieved.
 Nature of residual contamination
 Suggested precautions to be observed when handling or servicing

 ‡

Additional notes:
 ‡

| | |
|--|--|
| <p>LABORATORY MANAGER (OR EQUIVALENT) NAME SIGNATURE DATE</p> <p>HEAD OF DEPARTMENT /UNIT/CENTRE * NAME SIGNATURE DATE</p> | <p>I AM OF THE OPINION THAT EQUIPMENT IS:</p> <p>i) SAFE TO MOVE*</p> <p>ii) SAFE TO MOVE AS LONG AS THE PRECAUTIONS LISTED ABOVE ARE TAKEN*.</p> <p>DIRECTOR OF SAFETY DR. EDMUND HAU SIGNATURE DATE</p> |
|--|--|

‡ Lab manager (or equivalent) must initial these statements
 * delete as appropriate