Radiation Laboratory Decommissioning Record

Before vacating any premises or radioactive work areas, Department Heads must put appropriate arrangements in place to ensure sufficient time and resources to properly decommission the space:

* Complete radiation decommissioning and survey all areas under their control to confirm:
  + The space is free of radiological hazards
  + The space is fit for others to safely occupy and work in
* Fill out this Radiation Laboratory Decommissioning Record form fully.
* Submit the completed form to the Health and Safety Department for review.

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| Author: |  |
| Role: |  |
| School / Business Unit: |  |
| Building and room number: |  |
| Description of area: |  |
| Date of report: |  |
| Purpose of clearance: |  |

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| **Section (A) History of Radiation Use in Laboratory and Survey Strategy** | | | | | | | | | | | |
| Radionuclides known / suspected to have been used | | | | | | | | | | | |
| Tritium |  | Carbon 14 | |  | Phosphorus 32 |  | Phosphorus 33 |  | Iodine 125 | |  |
| Other (Please provide details) | | | |  |  | | | | | | |
| Details of radiation projects performed: | | | | | | | | | | | |
| *[Enter relevant details of radiation projects – isotopes, equipment, etc.]* | | | | | | | | | | | |
| Radiation Project codes | | | *[Enter Radiation Project code(s) here]* | | | | | | | | |
| Map of laboratory attached showing radiation areas attached | | | | | | | | | |  | |
| Map of areas to be monitored for contamination attached (see guidance below) | | | | | | | | | |  | |
| Confirmation of: | | | | | | | | | | | |
| All storage locations have been searched (cupboards / drawers / fridges / freezers) | | | | | | | | | |  | |
| All radioactive materials have been identified | | | | | | | | | |  | |
| All materials checked against IsoStock records | | | | | | | | | |  | |
| All radioactive materials have been removed | | | | | | | | | |  | |

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| **Method of contamination monitoring (enter monitor details)** | | |
| **Tritium / Carbon 14** | Indirect contamination monitoring using wipe tests and liquid scintillation counting (LSC) | |
| Wipes taken using |  |
| Details of LSC used |  |
| Proposed action level |  |
| **Phosphorus 32 / 33** | Direct contamination monitoring using |  |
| Proposed action level |  |
| **Sulphur 35** | Direct contamination monitoring using |  |
| Proposed action level |  |
| **Iodine 125** | Direct contamination monitoring using |  |
| Proposed action level |  |
| **Other** | Monitoring regime |  |
| Proposed action level |  |

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| **Monitoring of Radiation Laboratories Guidance** | |
| **Sinks and draining boards used for the disposal of aqueous radioactive waste** | Sinks/drains will be flushed with copious amounts of water. The draining board, sink and plug hole will be monitored. |
| **Sink traps from radiation sinks** | Following flushing with water the sink traps will be disconnected and monitored internally using a wipe test. |
| **Drainage** | Open ends of connected pipework will be monitored.  Depending on the type of isotopes used and the drainage plans further investigations may be required. |
| **Fume hoods used for work with radioactivity** | All internal work surfaces and aqueous waste disposal sinks will be monitored as above. Gaseous extract points will be monitored using wipes. |
| **Equipment** | All equipment in the room will be monitored (all external and internal surfaces) including fridges, freezers, and cold rooms.  Samples of freezer ice will be counted by liquid scintillation. |
| **Benches and cupboards** | A matrix of bench space will be monitored, including areas of known usage. Cupboard handles and under bench furniture will be monitored. |
| **Floors** | A matrix of the floor will be monitored. |
| **Further points where radioactive contamination is reasonably foreseeable, e.g. handles, switches etc.** | Monitored. |

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| **Section (B) Radiation Lab Decommissioning Checklist** | | | | | | |
| 1 | Room / Laboratory Designation: | Controlled | Supervised | | Registered | |
| 2 | Reason for decommissioning | Cessation of work | | Relocation of work | | |
| 3 | If relocation, state new laboratory location |  | | | | |
| 4 | All radioactive material removed | | | | |  |
| 5 | All radioactive waste removed | | | | |  |
| 6 | Usage and disposal records updated on IsoStock and checked (disposal date, route) | | | | |  |
| 7 | All empty containers removed and disposed of | | | | |  |
| 8 | Contamination monitoring results documented and sent to H&S Department | | | | |  |
| 9 | All loose surface contamination removed   * If any contamination remains, contact H&S Dept. | | | | |  |
| 10 | Sink Traps checked   * If any contamination remains on pipes / traps, contact H&S Dept. | | | | |  |
| 11 | Extract fume cupboards checked   * If any contamination remains, contact H&S Dept. | | | | |  |
| 12 | **ALL** radiation signage, tape, and warning notices removed | | | | |  |
| 13 | **ALL** equipment removed | | | | |  |
| 14 | All records up to date, available, filed locally, and copies sent to the H&S Dept. | | | | |  |
|  | * Local Rules | | | | |  |
|  | * Radiation Risk Assessment | | | | |  |
|  | * Usage and disposal records | | | | |  |
|  | * Summary disposal records | | | | |  |
|  | * Routine monitoring records | | | | |  |
|  | * Decommissioning monitoring records | | | | |  |
|  | * This IR008 Decommissioning checklist | | | | |  |

Once the decommissioning form is fully completed, it must go through an approval process:

* The Radiation Protection Supervisor (RPS) or Senior RPS should review the form and sign it to approve decommissioning of the specific lab.
* Copies of the signed form should then be sent to the Radiation Protection Officer (RPO) and Health & Safety (H&S) Department.
* The RPO/H&S Department should sign the form to indicate their approval of the decommissioning.
* Finally, the University Ionising Radiation Safety Committee (IRSC) should receive copies of all approved decommissioning forms.
* The IRSC will then formally approve the decommissioning of each radiation laboratory, providing final oversight.

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| **RPS approval:** | | |
| Name & position: | Date: | Signature: |
|  |  |  |
| **Approval by the H&S Department:** | | |
| Name & position: | Date: | Signature: |
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**Decommissioning Guidance**

**De-designation of Radiation Areas**

The RPS should de-designate areas or labs when no radiation work has been undertaken for six months.

At this point the RPS must undertake or supervise full contamination monitoring and any necessary decontamination. Once decontaminated, signs and labels on entry doors, sinks and equipment must be removed and not simply covered over as such coverings can become detached or misinterpreted.

This decommissioning form must be filled out. Keep it for your records and email a copy to the H&S Department at [H&S@Nottingham.ac.uk](mailto:H&S@Nottingham.ac.uk) for the attention of the H&S Advisor (Radiation).

**Decommissioning of Radiation Areas**

Decommissioning is defined as taking a laboratory out of use for work with radioactive materials for the foreseeable future for any of the following reasons:

* for hand-over to a contractor for refurbishment
* for hand-over to others who will not be using radioactive materials
* work with radioactive materials has ceased.
* when those using radioactive materials vacate the space.

The RPS or approved user must undertake full contamination monitoring and complete any necessary decontamination. You must ensure that when decommissioning of radiation facilities takes place, all work and storage areas, laboratory furniture and equipment is monitored for radiocontamination, and decontaminated as much as reasonably practicable. Where possible this should be to background levels or if that is not possible at least to below the derived level of contamination for a public area before removal. This must be done before other personnel, contractors or staff, occupy the area.

All documentation required as part of the decommissioning should be retained locally with copies sent to the H&S Department.

The RPO and RPA may need to assist with monitoring the laboratory for radio-contamination, however prior to any monitoring by the RPO / RPA, the RPS should ensure the following:

• all waste is disposed of

• all radio-chemicals are removed from the room, (and either disposed of or stored appropriately elsewhere)

• sinks and drainage are decontaminated to as low a level as possible. If after decontamination, there is still radioactivity present the pipework etc must be labelled as such.

• where tritium has been used, the area has been wipe tested and is free of contamination.

All trefoil warning signs must be removed from furniture and equipment before disposal and the warning signs disposed of as solid radioactive waste. Where items cannot be decontaminated, they must be disposed of through an approved disposal route.