

Decommissioning

1.0 Statement

All areas that have been listed on a Radioisotope User Permit (RUP) shall be decommissioned prior to being released from the conditions of the RUP.

Decommissioning of equipment is required prior to using the equipment without the restrictions outlined in the permit and prior to servicing or repairs by personnel not listed on the permit. Decommissioning of a room/area is required prior to repairs or renovation.

2.0 Definitions

2.1 Action Level

An action level refers to a specific parameter (in this case, level of radioactive contamination) that if reached may indicate the loss of control of part of the radiation protection program and must trigger (a) specific action(s) to regain control.

At Memorial University, the Action Level for removable radioactive contamination for most nuclear substances and radiation devices in use is **0.5 Bq/cm²**. Different Action Levels for certain nuclear substances may be required and will be listed in the conditions of the Radioisotope User Permit. The contamination level shall be averaged over an area not exceeding 100 cm².

2.2 Decommissioning

Decommissioning is the process of releasing a room/laboratory where nuclear substances and radiation devices were used or equipment from these rooms for non-radioactive use or for renovation or servicing. Decommissioning requires documentation to record that all nuclear substances and/or radiation devices have been removed and that no radioactive contamination is present in excess of regulatory limits.

2.3 Internal Radioisotope User Permit (RUP)

The University Radiation Safety Committee (URSC) issues a Radioisotope User Permit (RUP) to control procurement, use, storage, transfer and disposal of **all** nuclear substances and radiation devices in all areas under the control of the Memorial University.

3.0 Procedure

3.1 Decommissioning of equipment

- a) Decommissioning is required for equipment prior to service or disposal by personnel that are not trained.

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- b) All areas of the equipment shall be wipe tested to verify that contamination is below regulatory limits.
- c) A [Laboratory Equipment Release Form](#) must be completed for each piece of equipment to be services and/or removed from the room.

3.2 Decommissioning of rooms or laboratories

- a) To decommission a room or laboratory while **retaining** the Radioisotope User Permit complete the [Radioisotope Facility Decommissioning Form \(RLFD-Rev2\)](#) and forward it to the RSO.
- b) To decommission a room or laboratory and **Terminate** the Radioisotope User Permit, complete the [RUP Laboratory Decommissioning and Permit Termination Request Form](#) and forward it to the RSO.
- c) DO NOT remove the permit and radiation warning signage area at entry of lab (they will be removed by RSO only).
- d) Arrange to dispose (or transfer to another RUP holder) all nuclear substances, working solutions, samples and specimens and record actions on the EHS Assistant. Contact the RSO for assistance, if necessary.
- e) Arrange to have all waste generated by use of nuclear substances disposed of by the RSO.
- f) Monitor all areas and equipment within the area where nuclear substances have been used or stored for radioactive contamination. Remove all contamination above the action level.
- g) Remove all radioactive warning signs and tape in all areas and from equipment/apparatus after ensuring radioactive contamination is below the Action Level.
- h) If terminating an RUP, assemble all radiation safety records (procurement, inventory/use, disposal, inspection reports, etc.) for surrender to the RSO.
- i) The RSO will remove the posted permit and all other required postings only when satisfied that all required records are secured and the nuclear substance room/area is free of radioactive contamination within acceptable regulatory limits.