Radiation Safety Operating Procedure

Sealed Source - Posting

1.0 Statement

All areas listed on Sealed Source Radioisotope User Permits shall be posted with the information required by this procedure. Such postings are provided to communicate the type of radiation hazard and to provide information for emergency and routine work within these areas. This will ensure that Sealed Source nuclear substances and radiation devices and work areas are consistently labeled in compliance with the legal requirements.

2.0 Definitions

Devices Containing Sealed Sources
Devices containing integrated sealed sources that are not normally removable. Examples are liquid scintillation counters and electron capture chromatographs.

Exemption Quantity (EQ)
Isotope specific quantity defined by regulations below which Federal licensing is not required. Exemption Quantities are listed in the Radiation Safety Manual.

Nuclear Energy Worker (NEW)
A Nuclear Energy Worker is a person who is required in the course of their work at the University to perform duties in such circumstances that there is a reasonable probability that the person may receive a dose of radiation that is greater than the prescribed limit for the general public (1 mSv/year). Workers are informed in writing of their NEW status by the RSO.

Radiation Warning Symbol 
The **radiation warning symbol** shall be used to identify all areas where nuclear substances and radiation devices are used or stored.

Sealed Source Radioisotope User Permits
Sealed Source Permits are internal radioisotope permits specifically authorizing the use of sealed source nuclear substances and the conditions of that use.

Sealed (Nuclear) Sources
Sealed sources are nuclear substances that are encapsulated or encased in such a way that they are extremely unlikely to be absorbed into the body and therefore present only an external radiation hazard. An example would be small calibration sources and Mossbauer spectroscopy sources.

3.0 Procedures

3.1 A copy of the Radioisotope User Permit (RUP) and Authorized Worker List shall be posted in a prominent place in each location listed on the permit as approved for use and storage of nuclear substances (the exception to this involves sealed source/instrumentation laboratories housing shared liquid scintillation counters (LSC) where only the responsible person listed on the LSC permit is required to post an active RUP and worker list). It is the responsibility of Permit Holder to remove expired permits.

3.2 All laboratories listed as approved locations on a RUP shall have the fully completed Radiation Hazard Sign posted at all entrances to the laboratory. The RUP holder is responsible for ensuring that up to date signs are posted in COLOR. The Contact

Information shall include how to reach the Permit Holder and Laboratory Radiation Supervisor during the workday as well as after hours. The University 24 hour Emergency Contact information (CEP) shall also be included.

3.3 Any occupied location outside the storage area, room or enclosure where radiation fields are in excess of 25 µSv/hr at any time shall be posted as a radiation area and be accessible only to Nuclear Energy Workers (NEW). The warning "Rayonnement – Danger – Radiation" shall be posted.

3.4 Sealed sources and devices containing sealed sources in excess of one exemption quantity (>1 EQ) shall be labeled with the standard radiation warning sign, the name of the radioisotope, the activity and the date of measurement and the name of the Permit Holder. The exterior of a storage cabinets or containers used to store such sealed sources shall be marked with the Radiation Warning symbol to indicate the presence of nuclear substances and/or radiation devices.

3.5 Radiation warning symbols shall only be used as outlined in MUN's Radiation Safety Program. Unwarranted radiation warning symbols is considered **Frivolous use** and shall be removed.