



PROCEDURE FOR PROCURING, ACQUIRING AND LICENSING OF RADIATION PRODUCING EQUIPMENT AND RADIOACTIVE MATERIAL ON THE UNIVERSITY PREMISES

The University of Pretoria has a legal responsibility regarding licensing of radiation producing equipment and radioactive material in their possession according to the Hazardous Substances Act 15 of 1973, Regulations relating to Group III and IV Hazardous Substances, as well as the National Nuclear Regulator Act 47 of 1999 and Regulation number R388 of 2006.

Possession and use of such equipment or radioactive material without a valid licence or authority is illegal. The regulatory bodies in South Africa that control the distribution, possession and use of radiation producing equipment and radioactive material are the Department of Health: Radiation Control and the National Nuclear Regulator (NNR).

REGULATORY REQUIREMENTS

A: NEW EQUIPMENT

Radiation producing equipment

Radiation producing equipment requires licensing with Department of Health: Radiation Control for possession and use by the end user. Such equipment includes x-ray machines (used in radiology and dental departments), analytical machines (electron microscopes, spectrometers, diffractometers, XRF analysers) and laser equipment (Class 3b and 4). Completion of the application form to license these units for use at the University requires an import licence number for the unit model from its supplier. The import licence number is issued by the Department of Health and is model-specific.

Radioactive material

The suppliers of radioactive material (sources) must also have authority issued by Radiation Control to produce and supply the material to end users, or by an import authority if the radioactive material (source) is imported. The suppliers of sealed radioactive material (sources) must provide the end user with the original calibration certificate, which is needed to complete the application for authority to possess and use the material.

Naturally occurring radioactive material (NORM) measuring above 0,5Bq/g must be authorised with NNR and annual authority fees apply.

NOTE: The licensing of radiation producing equipment or radioactive material must be done prior to the delivery and installation of such equipment or material.

Recommendations

It is recommended that faculties and departments procuring radiation producing equipment and radioactive material do so in consultation with the Department of Facilities Management's Division for Occupational Health & Safety, to ensure compliance with the requirements of the Department of Health and the NNR.

Contact the Radiation Control Officer to ensure that the correct application procedure is followed and the correct regulatory body is contacted. The information can be sent to cynthia.mamatela@up.ac.za, tel: 012 420 6322.

B: GUIDELINES FOR DONATIONS OF RADIOACTIVE MATERIAL AND RADIATION PRODUCING EQUIPMENT

The possession and use of radiation producing material such as radioisotopes, NORM, x-ray producing equipment and certain classes of laser equipment is regulated in South Africa. The University has several authorities and licences issued by Department of Health: Radiation Control and a Certificate of Registration (COR) from the NNR. The two regulatory bodies perform periodic inspections to ensure that we comply with the conditions of these authorities, licences and the COR. The licences, authorities and COR require compliance with certain conditions, some of which have financial implications for the University such as the following:

- Application fee for COR
- Annual renewal of COR
- Extension of COR scope
- Appointment of Radiation Specialist (COR requirement)
- Performance of leak test on sealed sources
- Annual calibration of soil/density gauges
- Disposal of unused radiation sources at NECSA
- Disposal of radioactive waste (solid and liquid) at NECSA
- Disposal of NORM at a licenced site
- Annual quality control tests by accredited inspection bodies (licensed x-ray units used in clinical environment)

The following information must be collected before accepting any donation that is potentially radioactive / any laser equipment / x-ray producing equipment:

X-ray producing equipment

- Name and contact details of the donor
- Manufacturer, date of manufacture, model and serial number of equipment
- Current licence number from the DOH: Radiation Control (second-hand equipment)
- Import licence number from the DOH: Radiation Control (new equipment)

Laser equipment

- Name and contact details of the donor
- Manufacturer, date of manufacture, model and serial number of equipment
- Class of the laser equipment

Sealed radiation sources and gauges containing radiation sources

- Name and contact details of the donor
- Manufacturer and serial number of container (soil & density gauges)
- Type of radiation source
- Original activity of the source
- Serial number of the source
- Original calibration certificate (soil & density gauges)
- Current authority number from the DOH: Radiation Control

Naturally occurring radioactive material

- Name and contact details of the donor
- Location where the material was collected
- Type of isotope contained in the material and the activity per gram (if the donor has this information)

NOTE: If the analysis is not done by the donor, it will be at the cost of the University to analyse the material in order to identify the isotope(s) it contains and the activity per gram.

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