Radiation Protection Service

DUTIES OF PERSONNEL WORKING WITH IONISING RADIATION

Note: By law, ‘the undertaking’, ie. the University, Vice Chancellor, Heads of individual departments and each individual person working with ionising radiation, carry levels of responsibility for compliance with radiation legislation. This responsibility cannot be delegated to the DRPS nor to the RPA.

Role of the University Radiation Protection Advisor

Overall supervision and advice on radiological safety is the responsibility of the University Radiological Protection Advisor (RPA). The University Radiological Protection Advisor is Dr Peter Cole - phone 0151 794 3467, e-mail pcole@liv.ac.uk

The RPA may and indeed, must be consulted on certain issues but the ultimate responsibility for radiation safety in University rests with the University and with individuals within University departments who are working with radiation.

The RPA must be consulted with in relation to the following matters:

a) The examination and testing of protective devices and measuring instruments.
b) The prior critical examination of plans for installations from the point of view of radiation protection.
c) The acceptance into service of new or modified sources from the point of view of radiation protection.
d) The regular checking of the effectiveness of protective devices and techniques.
e) The regular calibration of measuring instruments, and the regular checking that they are serviceable and correctly used.

The duties of the RPA include the following:

a) To provide information and advice on all aspects of radiation protection in the University of Liverpool.
b) To aim to maintain radiation exposures at the lowest possible level by co-ordinating the radiation protection service in University of Liverpool.
c) To ensure that accurate records are maintained of personnel exposure and of incidents involving contamination or of any radiological significance.
d) To ensure that appropriate instruction is given in the proper procedures to be used and in the use of equipment necessary for safe working with ionising radiation.
e) To ensure that monitoring equipment is regularly checked and calibrated.
f) To ensure that records are maintained of importation, usage, storage and disposal of radioactive materials as may be required by the Environment Agency.
g) To ensure that all users of radioactive materials are informed of appropriate safety rules and national legislation as may be applicable.
h) To carry out such other duties concerning radiation safety as may be required by the Health and Safety Committee.

The RPA is authorised to refuse permission to undertake work with ionising radiation in any University department if he is not satisfied that the necessary safety requirements can be met. The RPA is also authorised to require that a work activity with ionising radiation, which she deems to be unsafe, or in contravention of the University licence requirements, or in contravention of the University Radiation Safety Procedures, cease or be suspended until appropriate control measures are implemented.

Role of the Departmental Radiation Supervisor (DRPS)

The main role of the DRPS is to ensure at a departmental level that the radiological protection requirements as determined by Ionising Radiation Regulations 99 and other legislation, the University’s Registration and
Authorisation provisions, and University Radiation Safety Procedures and Departmental Local Rules, are complied with by personnel working with radiation, within their department.

This includes ensuring that the following general arrangements are implemented:

a) Ensuring that all radioactive sources are labelled, segregated from other substances, and kept in a safe and secure location.

b) Ensuring that a warning system is in place for rooms containing irradiating apparatus, that there is appropriate signposting of radiochemical labs with trefoil signs, and signposting and control of controlled and supervised areas.

c) Ensuring that a copy of the University’s Registration and Authorisation and Departmental Local Rules are displayed within the department and ensuring that all users are aware of these and other relevant information, which is passed to the DRPS by the RPA or Radiation Safety Committee.

d) Ensuring that sources of ionising radiation or irradiating apparatus are only acquired in the department with the prior approval of the DRPS and RPA.

e) Ensuring that dosimetry badges are provided to all personnel likely to be exposed, that adequate records are maintained, and that high levels of exposure are investigated, and reported to the RPA.

f) Ensuring that routine checks and maintenance are carried out on irradiating equipment, in accordance with manufacturer's instructions, and ensuring that no modifications are undertaken to irradiating equipment without the prior approval of the RPA.

g) Ensuring that leak tests of closed sources are undertaken every 2 years.

h) Ensuring that adequate contamination monitoring programmes are implemented in radioactive work areas and ensuring that contamination levels are kept within the limits.

i) Ensuring that no radioactive source or irradiating apparatus is disposed of without the prior approval of the DRPS and the RPA, and ensuring that disposal is only undertaken in accordance with agreed and approved procedures.

j) Arranging for the disposal of all departmental radioactive waste in accordance with approved procedures, and liaising with the RPA as necessary. Keeping adequate records of all radioactive waste disposed of within the department.

k) Keeping all relevant records as required by the University licence and relevant legislation, and having such records available for inspection by the RPA.

l) Exercising control over the acquisition and disposal of sources, maintaining an inventory of sources within the department, and ensuring that there are no unlicensed sources in the department, and that the quantities of radioisotope which are brought into the department at any time do not exceed licence requirements.

m) Keeping records of the quantity and nature of each radioisotope. Keeping records of the usage and disposal of each source. Providing a monthly statement to the RPA of what radioactive sources were used in the previous month.

n) Ensuring that all new projects involving the use of radiation within the department receive the prior approval of the RPA.

o) Ensuring that all departmental personnel working with radiation are aware of the University licence conditions, and these University Radiation Safety Procedures, and satisfy competence requirements.

p) Ensuring that the department has an adequate number of monitoring instruments, & that they are calibrated regularly (every 12 months)

q) Ensuring that persons working with unsealed sources wear suitable gloves, safety glasses, and white coats & that persons working with unsealed sources in volatile / powdered form work only in a fume cupboard.

r) Taking appropriate measures on being notified of spillages, and advising the RPA if there is a possibility of exposure to excessive levels.
Role of the Individual

Each individual in University working with ionising radiation is legally responsible for taking all due care for their own health and safety and the health and safety of anyone who may be affected by their work activities.

All radiation workers in University are obliged to familiarise themselves with and to comply with the conditions of the University Registration and Authorisation, and the Local Rules for the Use of Sources of Ionising Radiation within their Department.

All radiation workers in University are obliged to consult with their DRPS before undertaking any work with ionising radiation, and as necessary during the course of their work.

All radiation workers in University are obliged to co-operate with their DRPS in complying with the provisions of the Local Rules, and are obliged to comply with any recommendations or advice given by the DRPS.

In particular all radiation workers are obliged to :-

a) To ensure that all radioactive sources are labelled, segregated from other substances, and kept in a safe and secure location.

b) To ensure that sources of ionising radiation or irradiating apparatus are only acquired in the department with the prior approval of the DRPS.

c) To ensure that dosimetry badges, if issued, are worn and returned promptly at the end of each issue period.

d) To ensure that no modifications are undertaken to irradiating equipment without the prior approval of the DRPS and RPA.

e) To ensure that leak tests of closed sources within their control are undertaken every 2 years.

f) To ensure that an adequate contamination monitoring procedure is conducted in radioactive work areas and ensuring that contamination levels are kept within the limits.

g) To keep records of the quantity and nature of each radioisotope under their control.

h) To keep records of the usage of each source under their control.

i) To ensure that no radioactive source or irradiating apparatus is disposed of without the prior approval of the DRPS and the RPA, and ensuring that disposal is only undertaken in accordance with agreed and approved procedures.

j) To arrange for the disposal of all departmental radioactive waste in accordance with approved procedures, and liaising with the DRPS as necessary.

k) To keep adequate records of all radioactive waste disposed of and to submit details to the DRPS in accordance with procedures laid down in the department.

l) To ensure that Risk Assessment and Best Practicable Means Documents are completed and approved by the DRPS prior to commencement of all new projects involving the use of radiation within the department.

m) To ensure that they are aware of the University licence conditions, the General and Departmental Local Rules.

l) To ensure that, whilst working with unsealed sources, they wear suitable gloves, safety glasses, and white coats and that, whilst working with unsealed sources in volatile / powdered form, they work only in a fume cupboard.

m) To take appropriate measures in event of spillages, (see Local Rules Part 2 : Contingency Plans) and advising the DRPS accordingly.