**RADIATION SAFETY CODE OF PRACTICE**

* The University of Liverpool will ensure, as far as reasonably practicable, the health and safety of its employees and students, of contractors working on the premises, and of members of the public who may be exposed to the hazards arising from the use of ionising and non-ionising radiation. It will also take all reasonably practicable steps to protect the environment from discharges and disposal of radioactive waste.
* The University of Liverpool will take all necessary steps to ensure compliance with The Ionising Radiations Regulations 2017 (IRR17), The Environmental Permitting Regulations 2016 (EPR16) (as amended) plus other relevant regulations (i.e. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG2009)). This includes compliance with the conditions and schedules contained in its EPR Sealed and Unsealed Permits.
* In addition, with respect to non-ionising radiation, the University of Liverpool will take all necessary steps to ensure compliance with The Control of Artificial Optical Radiation at Work Regulations 2010 and The Control of Electromagnetic Fields at Work Regulations 2016.
* The University of Liverpool is committed to a policy of restricting exposures to ionising and non-ionising radiation in accordance with the ALARP principle (“As Low As Reasonably Practicable”) and will affect this through the following organisational arrangements and responsibilities.
1. An individual Head of Department is responsible to the Vice-Chancellor for ensuring that a radiation protection programme is implemented and reviewed within their department.
2. Responsibility for closely supervising the work with radiation and ensuring that it is done in accordance with the written local radiation safety rules will lie with the departmental Radiation Protection Supervisors (RPS), or their equivalent for non-ionising radiation, appointed in writing by their Head of Department.
3. In departments that use sources of ionising radiation, the Non-Ionising RPS shall ideally be the same person as the RPS for ionising radiation.
4. In departments that do not use sources of ionising radiation (and thus do not have an RPS), the Non-Ionising RPS (dealing with lasers, ultraviolet sources, microwaves, EMF, etc.) shall be the Departmental Safety Co-ordinator (DSC).
5. All RPS’s and Non-Ionising RPS’s must be suitably and sufficiently trained commensurate with their duties. It is the responsibility of the Head of Department to ensure this training takes place.
6. Responsibility for advising managers, departmental heads and staff, and the public on radiation matters will lie with a Radiation Protection Adviser (RPA) appointed by The University of Liverpool.
7. Responsibility for ensuring that all radiation equipment is installed and ‘critically examined’ and maintained to satisfy radiation safety requirements and included in an equipment inventory and replacement programme will lie with the RPS, or their equivalent for non-ionising radiation (Non-Ionising RPS).
8. Responsibility for ensuring that all radiation workers are registered with, or notified to, The Radiation Protection Office lies with the RPS, or their equivalent for non-ionising radiation (Non-Ionising RPS).
9. Responsibility for ensuring that all registered radiation workers are adequately trained to carry out their work with ionising and non-ionising radiation lies with the Head of Department.
10. Prior to commencing their work with ionising or non-ionising radiation, workers shall attend a relevant ‘safety seminar’ (radiation, laser or UV) run by the Radiation Protection Office (every six months).
11. Each radiation worker shall attend a ‘refresher’ training session on radiation safety at least every 5 years.
12. Responsibility for maintaining a record of training of all radiation workers will lie with the RPS or their equivalent for non-ionising radiation (Non-Ionising RPS).
13. Responsibility for maintaining and reviewing an inventory of departmental radiation equipment and radioactive materials lies with the RPS.
14. Responsibility for ensuring that systems of work are in place for the safeguarding of radioactive materials, for the safe disposal of radioactive waste and for ensuring that all requirements of the Environmental Permitting Regulations 2010 are satisfied will lie with the Head of Department. Responsibility for drawing up such systems and ensuring their implementation will lie with the RPS.
15. The University of Liverpool will ensure that no new or modified work activity involving ionising or non-ionising radiation commences unless a suitable and sufficient assessment of the risk to any employee or other person has been performed, documented and filed, and that any remedial actions required by this assessment have been carried out. The duty to ensure these prior risk assessments are completed and periodically reviewed lies with the RPS or their equivalent for non-ionising radiation.
16. With respect to radioactive waste, the RPS is responsible for ensuring that the Best Available Technique (BAT) is used and that a BAT assessment is documented and held on file.
17. It is the responsibility of individual radiation workers to notify their RPS in writing if they become pregnant. The RPS shall then communicate this information to their Head of Department.
18. Once notified in writing, the Head of Department on behalf of The University of Liverpool shall ensure that the conditions of a pregnant ionising radiation worker’s exposure are such that the equivalent dose to the foetus is unlikely to exceed 1mSv during the remainder of the pregnancy. Also, all actions will be taken to restrict to ALARP the exposure (both internal and external) of breastfeeding members of staff to prevent significant exposure of the foetus.
19. The University of Liverpool will establish good communication and co-operation between managers, advisers, regulators, and trade union representatives.
20. The transport of radioactive materials and/or waste will only take place after prior consultation with the Radiation Protection Office (i.e. the RWA).
21. The University of Liverpool will give the RPA power to inspect and perform such tests as they may think appropriate to ensure safety and legislative compliance.
22. Individual radiation workers are required to work with radiation in such a way that they:
23. Exercise reasonable care and follow the Local Radiation Safety Rules (see LR1\_???)
24. Act to minimise any orphaned radioactive materials (see Radiation Protection\_Code of Practice\_Orphaned Sources\_2018)
25. Use any personal protective equipment (PPE) provided
26. Report any defect in PPE
27. Undertake any training deemed necessary
28. Use personal radiation monitors where instructed (see BADGE\_POLICY\_April 2015)
29. Individual workers must report immediately to their RPS, or their equivalent for non-ionising radiation, if any incident occurs in which they know or suspect that a member of staff has received a radiation exposure greater than intended or any other incident in which a person is exposed to radiation. In addition, there is a requirement for a University accident/incident form to be completed and submitted to the Safety Office.
30. Individual workers must report immediately to their RPS if they know of any unauthorised discharge or release into the environment, or spillage, of radioactive materials or waste. Also, they must notify the RPS immediately if they know, or suspect, that radioactive materials have been lost or stolen. In addition, there is a requirement for a University accident/incident form to be completed and submitted to the Safety Office.
31. The departmental RPS must be consulted when procuring sources of radiation. Consideration must be given to the ultimate disposal costs of equipment and radioactive waste at the procurement stage of any project.

**\*** ULTIMATELY RESPONSIBLE FOR RADIATION SAFETY AT UNIVERSITY OF LIVERPOOL.

(Opinion of the RSR Inspector for Environment Agency)

**Vice Chancellor \***

Deputy Vice Chancellor

Pro-Vice Chancellor

Chain of responsibility with delegated duties

Advice links

Head of School

Head of Department

 Departmental Radiation

 Protection Supervisor

 Deputy Radiation Protection Supervisor

Radiation Worker

Academic Supervisor (if applicable)

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(Opinion of the RSR Inspector for Environment Agency)

Director of Legal, Risk and Compliance

RPA and RWA