Licence

L0155-04

The Environmental Protection Agency, in accordance with the terms of the Radiological Protection Act, 1991 (Ionising Radiation) Regulations 2019, hereby authorises the Undertaking

University of Limerick
Castletroy,
Limerick,
V94 T9PX

to carry out the practice(s) listed in Table 1 using the Radiation Sources/Accelerators listed in Schedule 2 for the purposes therein at the authorised premises listed in Schedule 4 subject to the conditions listed in Schedule 1 of this Authorisation. These conditions may be amended at the discretion of the Environmental Protection Agency.

This authorisation does not exempt the Undertaking from compliance with other regulations or statutory requirements.

Signed Date 30 March 2019

On behalf of the Environmental Protection Agency

Table 1

Practice	Grade	Authorised From	Authorised To
Use of ionising radiation in a third level college (Practices subject to Licensing)	Licensed	01/04/2019	31/03/2029

A. GENERAL

1. The Licensee or Registered Person shall note that compliance with this Authorisation and its Conditions does not exempt the Licensee or Registered Person from compliance with the following: Statutory Instrument No. 30 of 2019, the Radiological Protection (Amendment) Act, 2002, and where applicable, Council Regulation (Euratom) No. 1493/93 of 1993 and the European Communities (Carriage of Dangerous Goods by Road and Use of Transportable Pressure Equipment) Regulations 2011 to 2018.

2. The Radiation Safety Procedures prepared by the Licensee or Registered Person shall have regard to the radiological risks and the nature of the practices carried out by the Licensee or Registered Person as well as the protective measures identified in the Licensee's or Registered Person's documented Prior Risk Assessment(s) pertaining to these practices. These should take account of guidance published by the International Atomic Energy Agency (IAEA) and relvant Codes published by the Agency (EPA).

3. The Licensee or Registered Person shall take all reasonable steps to ensure that the provisions of its Radiation Safety Procedures are observed.

4. The Licensee or Registered Person shall ensure that its Radiation Safety Procedures are brought to the attention of, and made available to, the relevant workers concerned.

5. The Licensee or Registered Person shall maintain a record of the date on which the Radiation Safety Procedures were made available to the relevant workers concerned and other persons who may be affected by the Procedures. This record must be made available for inspection by Inspectors of the Agency.

6. The Prior Risk Assessment(s) referred to above shall be reviewed by the Licensee or Registered Person (a) at least once during the period of validity of a licence, and (b) immediately, where circumstances arise in which the Licensee or Registered Person has reason to believe that the Prior Risk Assessment(s) are no longer appropriate,and shall be amended by the Licensee or Registered Person where required and the Radiation Safety Procedures revised where necessary.

7. Where there has been a change to the protective measures identified in the Prior Risk Assessment(s), a copy of the revised Risk Assessment(s) and the relevant section(s) of the Radiation Safety Procedures, where amended, shall in the case of licences, be submitted to the Agency. In the case of Registration, the revised documents shal be retained by the Registered Person for inspection by the Agency. The provisions in this Authorisation relating to Radiation Safety Procedures shall also apply to these amended Procedures.

8. The Radiation Safety Procedures shall be reviewed by the Licensee or Registered Person (a) at least once during the period of validity of an Authorisation, and (b) immediately, where circumstances arise in which the Licensee or Registerd Person has reason to believe that the Procedures are no longer appropriate,and shall be amended by the Licenseeor Registered Person where required.

9. Where structural or organisational changes are made by other parties to areas adjoining locations where sources of ionising radiation are used, the Licensee or Registered Person shall undertake a review of the radiation protection measures in place to ensure adequate protection is provided to all members of the public against the hazards associated with the use of the licensed items.

10. A copy of the Authorisation shall be publicly displayed in a suitable location in each of the premises listed in the Authorisation.

11. The Schedules to this Authorisation constitute part of the Authorisation and in the case of licences, may only be amended by the Agency. The Agency shall be informed of any proposals to change Schedules 2 or 3 of a licence prior to these changes taking effect. Licensed items may not be relocated or replaced, or new licensable items acquired without the Licensee securing from the Agency a prior approved Licence Change Request.

12. The Licensee or Registered Person shall carry out all practices authorised hereunder in such a manner that the radiation protection of staff and members of the public is optimised and, consequently, exposures are kept as low as reasonably achievable.

13. This Authorisation may be revoked if any of the conditions herein are not observed.

14. The practices authorised by this Authorisation may only be carried out with the items listed in Schedule 2, at the location or locations specified for such items in Schedule 2 and 4, except in the case of transportation, and in accordance with the Conditions set out in this Authorisation. The Authorisation shall include any restrictions relating to sources that may be specified in Schedule 2.

15. Save where otherwise approved in writing in advance by the Agency this Authorisation authorises the Licensee or Registered Person to carry out the practices specified on the first page of this Authorisation only insofar as such practices involve Radioactive Sources obtained by the Licensee or Registered Person from a supplier holding a current Authorisation from the Agency for the transportation and storage of the said Radioactive Sources.

16. Sealed radioactive sources shall be tested for leakage prior to their acquisition and the test certificate forwarded by the Manufacturer/Supplier to the Licensee or Registered Person. Sealed sources kept shall be tested for leakage at least once every two years or more frequently if recommended by the manufacturer. The Licensee or Registerd Person shall keep a copy of each leak test certificate. In the case of suspected damage to a sealed source or its housing, a leak test shall be immediately carried out. If the result of the leak test is positive then the Licensee or Registered Person shall consult with an RPA regarding disposal of said source. In the case of sealed radioactive sources containing krypton-85 or gaseous tritium, the test for leakage shall be carried out in accordance with the Manufacturer’s specifications.

B. MEDICAL USE OF X-RAY SYSTEMS IN THIRD LEVEL INSTITUTIONS

1. The Licensee shall seek advice from a Radiation Protection Adviser (RPA) from the register of approved RPAs on radiation protection and related issues related to the medical use of radiation sources as set out in the provisions of IRR19. The name of the RPA so consulted shall be listed in the Schedules attached to the Licence issued by the EPA. In the event of a change in RPA being envisaged, the Licensee shall notify the Agency, prior to any change taking effect, of the proposed change .

2. The Licensee shall inform the Agency of any proposals to change schedules 2, 3, or 4 of this authorisation, with respect to authorised items for medical use, in writing, prior to these changes taking effect. The documentation shall also be signed by the consulted RPA and the appointed RPO.

3. Without prejudice to any other condition in this authorisation, authorisable items for medical use shall only be acquired on foot of receipt of an authorisation from the Agency.

4. The Licensee shall ensure that all authorised items intended for medical radiological procedures have been commissioned by the consulted RPA and delcared to be fit for use. Written evidence of this shall be forwarded to the Agency prior to any such authorised items being used on patients.

5. THe Licensee shall ensure that all Irradiating apparatus, imaging devices, counting equipment and any other equipment, the performance of which may influence doses, are subject to appropriate quality assurance as drawn up by the consulted RPA. This testing shall form part of the commissioning procedure for all newly installed equipment.

6. All entrances to rooms where fixed X-ray diagnostic equipment is operated shall be fitted with a warning system which indicates when X-rays are about to be produced and which remains activated throughout the period of the exposure. Alternatively, the Licensee or Registered Person shall take appropriate measures to prevent entry to the room in which the authorised equipment is housed while it is in operation.

C. ACQUISITION

1. Without prejudice to any other condition in this Authorisation, items which fall under the scope of IRR19 shall only be acquired following receipt of an authorisation from the Agency.

2. Prior to acquiring any item that falls within the scope of IRR19 or commencing a new application or procedure involving an authorisable item, the Licensee or Registered Person shall carry out an assessment of the risks of exposure to ionising radiation for any worker or member of the public for the purposes of identifying the appropriate protection measures for that item. The Licensee or Registered Person shall ensure that this Prior Risk Assessment has (a) in the case of Licensing been forwarded to the EPA prior to the equipment being used on patients and (b) in the case of Registration has been confirmed in the Self-Declaration and then retained by the Registered Person for inspection by Inspectors of the Agency.

3. Prior to the acquisition of sealed radioactive sources, the Licensee or Registered Person shall obtain written agreement from the Manufacturer/Supplier that each radioactive source will be accepted back when no longer required.

4. In cases where a sealed radioactive source is being acquired to replace an existing source, the Licensee or Registered Person shall arrange to return the sealed source being replaced to the manufacturer, or a successor, in accordance with the conditions of this Authorisation.

5. In the case of authorised equipment intended for medical radiological procedures, the Licensee or Registered Person shall ensure that the authorised equipment has been commissioned and is declared to be fit for use, and that evidence of the commissioning has (a) in the case of Licensing been forwarded to the EPA prior to the equipment being used on patients and (b) in the case of Registration has been confirmed in the Self-Declaration and the evidence retained by the Registered Person for inspection by Inspectors of the Agency.

6. The Licensee or Registered Person shall ensure that an initial radiation survey is carried out by the Manufacturer/Supplier of each newly acquired radiation surce as part of the Installation Report.

D. DOSIMETRY AND REPORTING LEVELS

1. Notwithstanding the dose limits specified in IRR19, the Licensee or Registered Person shall carry out all practices authorised hereunder in such a manner that working conditions are optimised and, consequently, exposures are kept as low as reasonably achievable.

2. A personnel dosimetry programme shall be put in place unless a prior radiation risk assessment, carried out by the Licensee or Registered Person in consultation with an RPA, indicates that staff, based on the nature and magnitude of the risks of exposure to ionising radiation arising from the practice or from potential exposures resulting from the practice for workers and members of the public who may be affected are unlikely to be exposed to a dose exceeding 1 mSv in a calendar year. In the case of Licensing, the Prior Risk Assessment shall be documented and forwarded to the Agency for review and in the case of Registration the Prior Risk Assessment shall be confirmed in the Self-Declaration and the evidence retained by the Registered Person for inspection by Inspectors of the Agency.

3. The Licensee or Registered Person shall ensure that the Prior Risk Assessment is reviewed, in consultation with an RPA, periodically and also immediately in circumstances where there is reason to believe that the Risk Assessment is no longer appropriate. The review shall be documented and shall take account of any changes or modifications to the practice.

4. In the case of exposed workers, the Licensee or Registered Person shall investigate and document the findings of any practice, which, in any continuous sixteen-week period, has given rise to reported doses as follows: Category A Worker (including Apprentice & Student aged greater than 18 years) - Effective dose 6 mSv;Dose to lens of the eye 6 mSv;Dose to skin & extremities 150 mSv. Category B Worker (including Apprentice & Student aged greater than 18 years and Apprentice & Student aged between 16-18 years) -Effective dose 2 mSv;Dose to lens of the eye 5 mSv;Dose to skin & extremities 50 mSv. The report of the investigation, referred to above, shall be forwarded to the EPA within two weeks of notification of the dose to the Licensee or Registered Person.

E. DESIGN OF NEW RADIOLOGICAL FACILITIES

1. Notwithstanding the dose limits specified in IRR19, locations where radiation sources are used or stored shall be designed so that the dose to persons, other than exposed workers, is less than 0.3 mSv per year (see Design Code of Practice).

F. MAINTENANCE QUALITY AND OPERATIONAL CONTROLS

1. The authorised items shall be checked for correct operation and shall be serviced and maintained at least every 12 months or more frequently, depending on use, by suitably qualified and competent persons in accordance with the manufacturer's instructions.

2. Modification of an authorised item or of the area in which it is located shall only be carried out following consultation with an RPA and the RPO. In the case of licences, prior approval of the Agency will be required for said modifications.

3. The Licensee or Registered Person in consultation with the RPA shall develop an appropriate Quality Assurance (QA) programme for all radiation sources, counting equipment and any other equipment, the performance of which may influence doses to staff. This QA programme shall be documented and shall include details of all tests to be carried out by the licensee, routine in-house quality control (QC) tests and frequency of calibration for relevant radiation measuring instruments. The frequency of testing shall also be included. The Licensee or Registered Person shall ensure that the documented QA programme is implemented.

4. Notwithstanding the QA programme referred to above, all radiation sources shall be subject to an annual QA assessment undertaken by an RPA.

5. All radiation measuring instruments, used in the radiological surveillance of working environments, shall be individually calibrated before first use and annually thereafter, using sources or equipment traceable to appropriate national standards. Calibration records must be maintained for a period of at least five years from the date on which the record is made.

6. The Licensee or Registered Person shall ensure that the level of radioactive contamination on any surface does not exceed the following values (averaged over 100 cm^2): In Controlled Areas: Beta/Gamma Emitters - 40.0 Bq/cm^2; Alpha Emitters - 4.0 Bq/cm^2 . In Supervised Areas: Beta/Gamma Emitters - 4.0 Bq/cm^2; Alpha Emitters - 0.4 Bq/cm^2. In Public Areas: Beta/Gamma Emitters - 0.4 Bq/cm^2; Alpha Emitters - 0.04 Bq/cm^2. A surface with an activity level greater than the above values shall be decontaminated. In the case of contamination of the skin, decontamination procedures shall be immediately carried out if any level of radioactive contamination is deemed to have occurred.

G. SAFETY AND SECURITY

1. The Licensee or Registered Person shall have suitable security arrangements in place to prevent, in so far as is possible, the loss or theft of any authorised item and the unauthorised access to, or unauthorised removal from, its assigned location.

2. The Licensee or Registered Person shall take all reasonable steps to implement and observe the security arrangements for the prevention of the loss or theft of any authorised item and the unauthorised access to, or unauthorised removal of any authorised item from its assigned location.

3. The Agency shall be notified within seven days of any report from a manufacturer or supplier querying the safety of using an authorised item.

4. The Agency shall be notified of damage to, leakage from, or other incident/accident involving an authorised item, which could or has given rise to an unintended dose, as soon as possible and at the latest within 24 hours of occurrence of the incident/accident (see Guidelines for Reporting Incidents).

5. The authorised items shall be clearly labelled at all times and appropriate warning notices shall be used to indicate the ionising radiation hazards associated with these items.

6. Authorised items taken out of use and put into storage shall be stored in a secure location. Radioactive sources put into storage shall be adequately shielded. A visual check of these items, or where a prior agreement has been made with the Agency a check on the on-going security arrangements, shall be carried out at monthly intervals. A record shall be kept of these checks.

7. The Licensee or Registered Person shall immediately notify the Agency of the loss or theft of any authorised item.

8. When not in regular use, irradiating apparatus shall be safely and securely stored and clearly identified as being capable of producing ionising radiation. Appropriate measures shall be put in place to ensure that irradiating apparatus cannot be switched on.

9. Irradiating apparatus, when being transferred between on-site and/or off-site locations, shall be carried in a manner that prevents the possibility of it being energized by unauthorized personnel if, for example, the vehicle that is carrying the irradiating apparatus should be stolen.

10. In addition to the standard radiation warning notices, a warning sign shall be affixed to each disused authorised item stating clearly that the item must not be moved from its storage location without the prior authorisation of the RPO or RPA. In the case of licences, prior authorisation shall be required from the Agency.

11. The Licensee or Registered Person shall ensure that the Chief Fire Officer of the Local Authority is informed annually of the locations of all radioactive sources held by the Licensee or Registered Person. A revised plan of the Licensee or Registered Persons premises shall be submitted to the Chief Fire Officer following a change in the location of any fixed radioactive source. The Chief Fire Officer shall also be advised in writing upon the removal of any or all radioactive substances held by the Licensee or Registered Person.

12. When not in use, authorised items shall be safely and securely stored in such a manner that radioactive sources are segregated from non-radioactive materials and appropriate measures are in place to ensure that irradiating apparatus cannot be switched on.

13. A suitable warning notice shall be affixed to all authorised items when taken out of use and put into storage stating clearly that the items must not be used or moved from their storage location without the prior authorisation of the RPO or RPA.

14. The authorised radioactive sources shall not be used for human in-vivo applications.

H. RETURN OR REMOVAL OF SEALED SOURCES AND/OR IRRADIATING APPARATUS

1. Licensable items shall only be returned or removed following receipt of prior written authorisation from the Agency.

2. Disused sealed radioactive sources shall be returned to the Manufacturer, or to a successor Company as soon as possible following the decision that no further use is required of said sources.

3. In the case of disused irradiating apparatus the Licensee or Registered Person shall comply with the EPA Guidance Note on Management of X-ray Units at End-of-Life.

I. RECORDS

1. The Licensee or Registered Person shall make and fully maintain all relevant records for the authorised items. These shall include, but not be limited to, details of acquisitions, leakage tests on radioactive sources, the serial numbers and/or other unique identifiers for authorised items, installation and servicing reports, dates on which Radiation Safety Procedures were made available to the workers concerned and other persons who may be affected by the procedures, instrument calibrations and any associated deficiencies, incidents/accidents, monthly visual checks, radiation surveys, HASS record sheets, returns/removals or other disposal arrangements, individual dose monitoring of personnel and monitoring of areas in which authorised items are located.

2. The Licensee or Registered Person shall ensure that all records pertaining to an Authorisation are fully maintained and readily available for inspection, at all reasonable times, by Inspectors of the Agency.

J. DISPOSAL

1. Licensed items shall only be disposed of following receipt of written authorisation from the Agency.

2. Unsealed radioactive substances may only be discharged to the foul sewer with prior written approval from Irish Water and then only in accordance with the conditions of this Authorisation. In circumstances where the solutions contain solvents which are not permitted to be disposed of via the foul sewer system, consideration will have to be given to pre-treating these solutions in order to remove the solvents.

3. Waste containing unsealed radioactive substances shall not be disposed of unless: (a) for the total quantity to be disposed of per day, the sum of the ratios between either the activity or the activity concentration of each of the radioactive substances being disposed of and the corresponding exemption values listed in Table A, Part 1 or Column 3,Table B, respectively, of Schedule 7 of IRR19, are each less than or equal to 1; and (b) the waste is not deliberately diluted for the purposes of disposal; and (c) in the case of liquid waste, the waste is soluble/miscible in water and is discharged directly to the sewers and (d) radiation warning labels and markings are removed or defaced prior to disposal.

4. If it is intended to transfer any authorisable items to another company, the Licensee or Registered Person shall ensure that the proposed recipient is aware of the requirement to take out an Authorisation from the Agency prior to the transfer taking place.

5. In the event that items are authorised for disposal to a disposal facility, whether directly to such facility or through the services of a specialist disposal facilitator, the Licensee or Registered Person shall maintain its Authorisation in respect of such items until same are accepted at the disposal facility and, in the event that the items are not accepted at the disposal facility, or have to be returned to Ireland for any other reason, the Licensee or Registered Person accept the return of the items by the disposal facility or specialist disposal facilitator.

K. TRANSPORTATION

1. The licensee or Registered Person shall ensure that all activities associated with the transport of radioactive material, including shielding, packaging and labelling, shall be in accordance with the current International Atomic Energy Agency's Regulation for the Safe Transport of Radioactive Material, the Modal Instruments and national transport Regulations.

2. Radioactive sources must be transferred directly from one location to another and transportation by road within the State may only be undertaken with the authorisation of the Agency.

L. FOR LICENSEES HOLDING HIGH ACTIVITY SEALED SOURCES (HASS)

1. All Licensees shall check annually that the Manufacturer/Supplier/Radioactive Waste Management Facility with which it has an agreement for dealing with HASS when they become disused sources is still in a position to honour that agreement. If this is not the case then the Licensees will be required to make new arrangements.

2. All Licensees shall formally confirm the documented arrangements in writing to the Agency on an annual basis, and maintain the required records.

3. Any changes in the financial costing and the written guarantee from the Licensee for the safe management of HASS shall be confirmed in writing to the Agency on an annual basis.

4. Any changes in the particulars of the Licensee’s security audit shall be confirmed in writing to the Agency on an annual basis.

5. The Licensee shall ensure that each HASS purchased is accompanied by written information from the Manufacturer/Supplier indicating the source unique ID number; details of how it is marked; details of the source content, and the source container/housing ID number. The information shall also include photographs of the source, source container/housing, transport packaging, device and any associated equipment as appropriate.

6. The Licensee is required to keep a record for each HASS, hereafter referred to as a HASS Record, and to forward this record to the Agency.

7. HASS Records shall include the information as set out in the EPA Record Sheet for HASS. Licensees must keep records of all HASS under its responsibility, their location and transfer.

8. The Licensee shall provide the Agency with an electronic or written copy of all or part of the records referred to above in the following cases: (a) Without undue delay, at the time of the establishment of such record, which shall be as soon reasonably practicable after the source is acquired, (b) At intervals, determined by the Agency of not more than 12 months, (c) If the information on the Record Sheet for HASS has changed, (d) Within four weeks of the closure of the records for a specified source (e) In advance of any HASS amendments or transfers, (e) Whenever so requested by the Agency.

9. Licensees shall arrange training in the field of radiation protection, and they shall ensure that such training includes specific requirements for the safe management of sources. The information and training shall place particular emphasis on the necessary safety and security requirements, and shall contain specific information on possible consequences of the loss of adequate control of sources. This training shall be repeated at regular intervals (annually) and shall be documented, with a view to preparing the relevant workers adequately for such events. The training shall be addressed to exposed workers.

M. EXPORT / IMPORT

1. The exportation of radioactive substances to countries outside the European Union shall be limited only to those items marked “For export” in Schedule 2 of this Authorisation and to the supplier/destination specified.

2. The Licensees or Registered Person shall obtain written confirmation verifying the receipt of the radioactive substance at the receiving destination and forward it to the Agency.

3. The importation of radioactive substances from countries outside the European Union shall be limited only to those items marked “For import” in Schedule 2 of this Authorisation and from the supplier/destination specified.

4. For sealed radioactive sources shipped within the European Union, the Standard Document pursuant to Council Regulation 1493/93 must be completed by the consignee and stamped by the relevant regulator in advance of the proposed shipment. A copy of the 1493/93 form stamped by the relevant regulator must be forwarded to the Agency in advance of shipments from Ireland.

N. REFERENCES

1. Radiological Protection Act, 1991 (Ionising Radiation) Regulations 2019 (S.I. No. 30 of 2019)

2. Radiological Protection (Amendment) Act, 2002 (No. 3 of 2002).

3. Council Regulation (Euratom) No. 1493/93 of 8 June 1993 on Shipments of Radioactive Substances between Member States.

4. European Communities (Carriage of Dangerous Goods by Road and Use of Transportable Pressure Equipment) (Amendment) Regulations 2011-2018.

5. ADR. European Agreement Concerning the International Carriage of Dangerous Goods by Road. UNECE (January 2017).

6. International Civil Aviation Organisation ‘Technical Instructions for the Safe Transport of Dangerous Goods by Air’, 2015-2016 Edition.

7. International Maritime Organisation ‘International Maritime Dangerous Goods Code’, 2014 Edition.

8. Guidelines for Reporting of Incidents, Radiological Protection Institute of Ireland, August 2013.

9. Recording and Reporting of the Disposal of Unsealed Radionuclides Discharged to the Sewers, Radiological Protection Institute of Ireland, March 2004.

10. Management of X-ray Units at End-of-Life, EPA, January 2015.

Authorisation No: L0155-04 **Expiry Date:** 31/03/2029 **Authorised:** University of Limerick

Premises: Castletroy, Limerick, V94 T9PX

Location	Source Serial Number	Radioactive Source	Purpose
Main Building Room CO-052	A6970	Strontium-90	Higher Education/Research
Licensing Restriction		**Activity Level**	**Device/Housing Id**
		185.00 kBq	13
Practice			
Use of ionising radiation in a third level college (Practices subject to Licensing)			
Activities			

Location	Source Serial Number	Radioactive Source	Purpose
Main Building Room CO-052	A6797	Radium-226	Higher Education/Research
Licensing Restriction		**Activity Level**	**Device/Housing Id**
		185.00 kBq	20
Practice			
Use of ionising radiation in a third level college (Practices subject to Licensing)			
Activities			

Location	Source Serial Number	Radioactive Source	Purpose
Main Building Room CO-052	A211	Americium-241	Higher Education/Research
Licensing Restriction		**Activity Level**	**Device/Housing Id**
		185.00 kBq	27
Practice			
Use of ionising radiation in a third level college (Practices subject to Licensing)			
Activities			

Location	Source Serial Number	Radioactive Source	Purpose
Main Buildiing Room CO-052	GU248/CDR8152/V59836	Caesium-137	Higher Education/Research
Licensing Restriction		**Activity Level**	**Device/Housing Id**
		370.00 kBq	N/A
Practice			
Use of ionising radiation in a third level college (Practices subject to Licensing)			
Activities			

Location	Source Serial Number	Radioactive Source	Purpose
Main Building Room CO-052	A7646	Cobalt-60	Higher Education/Research
Licensing Restriction		**Activity Level**	**Device/Housing Id**
		185.00 kBq	17
Practice			
Use of ionising radiation in a third level college (Practices subject to Licensing)			
Activities			

Premises: Materials & Surface Science Institute Building, Limerick

Location	Manufacturer	Model	Purpose
LAB NO: MSG-006	Bruker	D8 Quest	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
LAB NO: MSG-006	Bruker	D8 Quest	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
Room No: MSB36	Carl Zeiss Industrielle GMBH	Versa XRM-500	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Premises: Physical Education and Sport Science Building, Limerick

Location	Manufacturer	Model	Purpose
PG 102, PESS DXA Scanning Room	GE Medical Systems		Bone Densitometry
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed	Custody and Commissioning	
Activities			

Premises: Castletroy, Limerick, V94 T9PX

Location	Manufacturer	Model	Purpose
Lonsdale Building LB 015	Hewlett Packard	Faxitron Unit	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
Main Building XRD Room BO-012	Philips	Xpert PRO Systems	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
Main Building Room CO-052	Teltron Ltd London	580 Tel-X-Ometer	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
Main Building XRD Room BO-012	Philips	Sequential XRF 60 kV	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Premises: Castletroy, Limerick, V94 T9PX

Location	Manufacturer	Model	Purpose
Main Building Room CO-052	Teltron Ltd London	580 Tel-X-Ometer	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
MSSI Building Room MSG-006	PanAlytical Limited	X'Pert PRO MPD	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
	Fixed		
Activities			

Location	Manufacturer	Model	Purpose
MSSI Building (MSG006)	PanAlytical Limited	Empyrean	Higher Education/Research
Practice	**Type**	**Licensing Restriction**	
Use of ionising radiation in a third level college (Practices subject to Licensing)	Fixed		
Activities			

Authorisation No: L0155-04 **Expiry Date:** 31/03/2029 **Authorised:** University of Limerick

Name	Title	Department / Location / Address
X-Spect Ltd	Radiation Protection Advisor	

Name	Title	Department / Location / Address
Mr. Philip Thornton	Radiation Protection Officer	

Authorisation No: L0155-04 **Expiry Date:** 31/03/2029 **Authorised:** University of Limerick

Name	Address
University of Limerick	Castletroy, Limerick, V94 T9PX

Name	Address
Materials & Surface Science Institute Building	Materials & Surface Science Institute Building, Limerick

Name	Address
Physical Education and Sport Science Building	Physical Education and Sport Science Building, Limerick