For: Heads of all Establishments/Settings
OCC Managers
Governors/Management Committees
Trade Union Safety Representatives
Employee Notice Boards
Intranet

Ionising Radiation Safety

Ionising Radiations Regulations 1999 (IRR99)
Environmental Permitting Regulations 2010

Purpose
The purpose of this procedure is to ensure that Oxfordshire County Council, as the employer, ensures the health and safety of employees and students/ pupils when working with equipment containing sources of ionising radiation, and that establishments comply with the regulations on the use of ionising radiation at work.

Radiation is energy that is emitted in the form of either non-ionising or ionising radiation and **ionising radiation is more hazardous** since it has the ability to change the structure of cells.

Heads of Establishments/ Settings need to be aware of the various sources of ionising radiation on their site and the hazards associated with the use of radiation sources, with the control measures required.

Scope
This procedure applies to all establishments/ settings where equipment containing an ionising source of radiation is used, including secondary schools.

Sources of Ionising Radiation used in secondary schools:

Closed Sources	**Open Sources**
Americium -241	Uranium and Thorium compounds (<5Kg)
Plutonium - 239	Thoron generator
Strontium - 90	Rock Sets
Cobalt - 60	Protactinium generators
Radium – 226	

Definitions
Closed sources = cup sources typically of but not more than 185 kBq

Radiation Protection Adviser (RPA)
All employers need to consult a suitably competent RPA with regards to compliance with IRR99. (See contact details at end of policy.)

Radiation Protection Superviser (RPS)
The RPS is the person on-site who supervises the use of the radiation sources.

Responsibilities of the Radiation Protection Superviser
Each establishment/setting holding radiation sources is required to appoint a Radiation Protection Supervisor. The RPS has a significant role and this should not be underestimated. The RPS carries out a supervisory role assisting the employer to comply with the regulations. **Suitable training is essential to fulfil the following duties**:

- Keep list of sources up to date;
- Notify Radiation Protection Adviser (RPA) of any changes;
- Ensure sources are kept in a locked, non-portable, fireproof container, properly signed and away from flammable substances.
- Inform the Fire Service of the storage location;
- Ensure that a logbook is kept with the sources, and details of individual source movements are being maintained;
- Ensure a risk assessment has been prepared and is issued to, and discussed with, relevant employees;
- Ensure “Local Rules” (Operating Procedures) have been formulated and are kept up-to-date (See Annex 1);
- Carry out leakage tests as appropriate and;
- Arrange safe disposal of sources via the RPA.

The control measures for ionising radiation are:
- A detailed risk assessment
- Secure storage
- Authorised access to sources
- Time: Limited exposure time
- Distance: Operate within a safety zone and a reasonable distance from source
- Shielding: Use appropriate shielding (depending on type of radiation)

Records to be kept of:
- Date of receipt of the source, the nuclide and activity,
- Letter of approval from the employer*
- Movement / use of source
- Leakage (wipe) tests (to be carried out every 2 years)
- Disposals

- Schools should ensure compliance with CLEAPSS guidance – L93 Managing Ionising Radiations & Radioactive Substances in Schools etc.

** Information for Schools when purchasing new sources*

In Community and Controlled Schools the Local Authority is the employer, therefore a letter of authorisation is required from the Director of Children, Education and Families, Oxfordshire County Council.

In Voluntary Aided and Foundation Schools the employer is the Board of Governors, therefore a letter of authorisation is required from the Chair of Governors.

Environmental Permitting Regulations (EPR)

Only sources that are Out of Scope or Exempt may be used in Schools.
Out of Scope means not radioactive for the purposes of EPR.
Exempt means that no radioactive substances permit is required under EPR.

Sources listed on page 1 fall into the exempt or out of scope category. Schools should check that they do not hold other sources. If this is the case they should contact the RPA.

No "gifts" containing radioactivity are to be accepted – specialist disposal of unsuitable items is very, very expensive, and the **establishment/setting will have to pay for specialist disposal.**

A pro forma for Local Rules is attached in Annex 1.

See also policy on Non-Ionising Radiation Safety

For further information and advice:		
	email and web addresses	☎
Specialist:		
Radiation Protection Adviser	**Dr Keith Bowker** **Oxford Safety & Risk Management**	**01235 555411** **07831 651726** **01235 538238** (evening & W/E)
CLEAPSS	**Managing Ionising Radiations and Radioactive Substances in Schools etc L93** http://www.cleapss.org.uk/download/L93.pdf	
General:		
Health, Safety & Wellbeing Team	**email:** healthandsafetyhelp@oxfordshire.gov.uk **web address:** http://intranet.oxfordshire.gov.uk/links/intranet/healthandsafety	**01865 797222**
H&S Training Learning & Development	**email:** LandD.sharedservices@oxfordshire.gov.uk	**01865 797123**

LOCAL RULES - USE OF CLOSED RADIATION SOURCES

Name of Establishment: _____

IONISING RADIATIONS REGULATIONS 1999

1. The name and home telephone number of the Radiation Protection Supervisor (RPS) is:

   _____

2. The names of the personnel authorised to use the sources are:

   _____

3. The normal location of the sources, together with names of key holders are:

   _____

4. Sources may only to be used in the following areas:

   _____

5. Each person in charge, using the sources, must record the date and time of removal and return of each source from / to the store in the record book provided

6. All sources should be handled with tweezers/tongs and the area where the sources are to be used should be delineated and signed with the radiation warning sign and the words “sealed sources of low risk”.

7. Wherever possible, only one box of sources should be used at any one time in any one container. Sources not in use should remain in their containers.

8. The RPS is responsible for keeping suitable records.

9. The immediate vicinity around each source becomes a controlled area during the experiment. Such areas should be delineated using, for example, trays and Radiation warning tape.

10. All sources must be inspected on return by the person in charge

11. Any loss or theft of a source must be reported to the RPS, who in turn must immediately inform the **Radiation Protection Adviser, Dr. Keith Bowker,** (tel:01235 555411 or 01235 538238 (evening and W/E). The RPS, in consultation with the RPA will be responsible for any necessary notification to the Health and Safety Executive, the Environment Agency, and the local Police.

12. Leakage testing will be carried out at twenty-four month intervals. The RPS is responsible for arranging testing and keeping suitable records.

13. Pupils under 16 years of age are not be permitted to handle sources i.e. demonstration only practical classes are permitted. Pupils over 16 are permitted to handle sources at the discretion of the teacher in charge.

14. Trainee teachers are only permitted to use sources in class under qualified teacher supervision.

15. All teacher and technical staff handling radioactive sources must be fully aware of the appropriate risk assessment.

16. Any female employee handling the radioactive sources is requested to notify the RPS if she becomes pregnant in order that the risks may be reviewed.

17. Any other sources e.g. radioactive rock sets, clocks/watches containing radioactive dials etc. must be kept in plastic bags and accounted for in a similar manner to that of the other sources in the establishment/ setting.