



RPS courses

Radiation Protection Supervisors

Programme for users of

**laboratory
radiochemicals**



Radman Associates

Specialists in radiological protection

RPS COURSES

- Short Courses at regional centres
- Special advisory courses of 1 or 2 days are held at company premises by arrangement and with programmes designed to particular requirements

Full particulars may be obtained from:

The Secretary

Radman Associates
Harvey House
Bollington
Macclesfield SK10 5JR

Telephone: (01625) 576000
Fax: (01625) 576001

Web: www.radman.co.uk



Radiation Protection Supervisors

Under the Ionising Radiations Regulations 1999 Reg 17(4) the employer must appoint one or more suitable Radiation Protection Supervisors for the purpose of securing regulatory compliance in any area made subject to Local Rules.

In order to assist the employer in achieving optimal radiation safety in the workplace, the RPS must be sufficiently trained in the nature of the risk and their radiation protection duties. Whilst principally designed for the training of RPS's, therefore, these courses are suitable for all staff who have responsibility for or duties concerned with ionising radiations from radioactive sources and X-rays sets.

The course content enables delegates to become conversant with the properties of the radiations and their respective hazards, and with the modern methods of radiation protection management. The course programmes are planned to give a thorough familiarity with the requirements of the Regulations. Changes which have been introduced into new statutory requirements are given prominence and emphasis is given to practical methods of protection with demonstrations and syndicate exercises to involve as much participation of delegates as possible.

Two separate programmes are conducted regularly throughout the year for users of:

- *Laboratory Radiochemicals – for those using unsealed radioactive materials in tracer quantities, with emphasis on contamination control.*
- *Sealed Sources and X-Rays – for those using such radiation sources in industrial process controls or research applications, with emphasis on external radiation exposures.*

An important feature of the courses is their introduction, when members declare the particular radiation sources they are concerned with. The tutors then make sure to include the radiological characteristics and control measures relevant to those sources, and ample opportunity is given for individual discussion.



Radiation Protection Supervisors (Laboratory Radiochemicals)

Course Programme

Day 1

13.00 - 13.15

Introduction to Course

Delegates describe their use of radiochemicals.

13.15 - 14.00

Ionising Radiations

Radioisotopes and their radiations; decay and half-life; units of activity; significant quantities and energies; soft beta emitters in biochemical research; properties of the radiations.

14.00 - 14.30

Radiation Dose

Dose quantities and units; background exposures; benchmarks of dose; dose coefficients; laboratory exposure levels.

14.30 - 15.30

Legislation

The Radioactive Substances Act 1993; the Ionising Radiations Regulations 1999 and ACoP; transport of sample materials; enforcing remits of the Environment Agency and the HSE.

Tea

16.00 - 16.30

Video : 'Contamination Control 1'

16.30 - 17.30

Risk Assessments and Contingency Plans

Requirements for undertaking prior risk assessment and assessing the risk from accidents, inc. example for radiochemical work.

17.30 - 18.00

Briefing for evening syndicate work

Syndicates are given details of typical laboratory scale accidents confronting RPS's.

Dinner

Evening

Delegates detail their proposals and prepare responses for presentation to the group at the end of Day 2.

End of day 1



Radiation Protection Supervisors (Laboratory Radiochemicals)

Course Programme (continued)

Day 2

08.30 - 08.45

Day 1 review

08.45 - 09.45

Basis of Setting Dose Limits

Biological effects; assumptions about human response to irradiation; stochastic and deterministic effects; evidence of radiation damage; dose limits and ALARP.

09.45 - 10.30

Contamination Monitoring

Selection of appropriate instruments; checks and calibrations; monitoring routines; swab tests; interpretation of readings.

Coffee

11.00 - 12.00

Restriction of Exposure

Relationship between source activity and dose rate; skin doses from soft beta emitters; finger doses from ^{32}P ; whole-body exposures from ^{125}I and ^{51}Cr

12.00 - 12.30

Video : 'Contamination Control 2'

Lunch

13.30 - 14.30

Response to Incidents

Real laboratory incidents involving sources of ionising radiation; general discussion on actions to be taken by the RPS in each case.

14.30 - 15.00

RPS duties and Local Rules

A summary of RPS duties and management of radiation safety by supervision of Local Rules.

15.00 - 15.30

Compliance Inspections by the HSE/EA

A short questionnaire followed by general discussion concerning inspections by the enforcing authorities.

Tea

15.45 - 16.45

Syndicate Reports

Short presentations are made by each group outlining their analysis of the problem and course of action.

Close of Course



Radiation Protection Advisory Services

Radman Associates

Harvey House
Bollington
Macclesfield
SK10 5JR

Tel: (01625) 576000
Fax: (01625) 576001

Web: www.radman.co.uk

Email: admin@radman.co.uk

