



UNIVERSITY OF CAMBRIDGE

Occupational Health and
Safety Service

memo

To Radiation Protection Supervisors and Departmental Administrators
From David Plumb, Radiation Protection Adviser
Date 16 April 2013
Subject Update information
Our Ref S/RPSS/13/132/DP/em

A DATE FOR YOUR DIARY! –The RPS update meeting next year will be on the morning of Wednesday 26th March 2014. The meeting will be held at the Cancer Research UK Cambridge Institute, Addenbrooke's Hospital site.



Following the Radiation Protection Supervisors update meeting held on 21 March 2013, a reminder of some of the topics covered is provided below. These topics are relevant to RPS and also to Administrators and senior management of departments. The PDF versions of the presentations for most of the sessions from the update meetings, from the past five years, can now be found at:

<http://www.admin.cam.ac.uk/cam-only/offices/safety/radiation/ir/training/index.html>

1. Hand-held x-ray machines

Lisabeth Yates presented information on the applications of and safe use of hand-held x-ray machines. This type of equipment is increasingly used in Universities in disciplines such as archaeology, conservation and museums. The comparatively light weight and portability of these items results in their use in field-work situations often well away from the normal safe working constraints within a University department. The key messages given were to heed the information provided by the manufacturer or supplier, consult the University RPAs in advance of purchase, and proceed through the stages of prior risk assessment and determination of ALARP!

2. Contingency plans – preparing and rehearsing

David Plumb reminded the meeting of the need for contingency plans (under the IRR 99, as part of the local rules written for Controlled and Supervised

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areas), is dependent on a judgement, from the risk assessment, that a radiation accident is reasonably foreseeable (a radiation accident being a situation whereby immediate action is needed to prevent or reduce the radiation exposure of an employee OR any other person). Preparation of a contingency plan however, is not the 'first-step' – the Ionising Radiations Regulations also require that all practicable steps are taken to prevent accidents, lessen the consequences of any accident that does occur, and, provide employees with the information, instruction and training necessary in order to restrict their exposure to ionising radiation. Rehearsal of the arrangements in an IRR contingency plan is required 'where appropriate'. There are also implied requirements for contingency plans and rehearsal in the Environmental (EPR) Regulations. 'Rehearsals' can take several forms – setting up of scenarios to mimic the incident involving spillage or release of radioactive materials, or 'table-top' exercises including those who would be involved or affected by an incident and the contingency plan. Overall, within the University, the 'table-top' approach is generally advised, provided a written record is made of the exercise and any outcomes and actions resultant on it.

3. Risk assessment – The bigger picture

Will Hudson presented information on factors affecting the level of risk perception, stressing that this is a subjective judgment made about the character and severity of risks – whilst it is possible to quantify the risk to individuals from the use of known amounts of ionising radiations, other hazards may result in varying levels of perception depending on who is involved or who is carrying out the assessment. Three examples of radiation and associated hazard situations involving University activities were given, with the conclusion that satisfying the Regulators (HSE and the EA) is only part of the process – and a holistic risk assessment process should also need to attempt to address the risk-perceptions of individuals.

4. Developing the EPR 'matrix' or check-list

The overall concept of the EPR 'matrix' now seems to be understood, and it was noted that the EA are strongly in favour of more widespread use of the process. A reminder was given however, that when completing the columns showing compliance, written references to specific documents with section/chapter and page numbers was required – a simple 'yes' – or a 'tick' does not satisfy the requirement to demonstrate the existence of compliance within the University or a department!

5. Audits, EA inspections and the RASCAR reporting format

An update was given setting out progress with the current audit programmes and the inspection programmes of the EA. Areas where some improvements are still needed in some departments, include incomplete or confusing monitoring records, incomplete records of training – particularly practical training – reasonable understanding and description of processes to aid 'BAT', and evidence of contingency plan rehearsals.

6. Incidents that have recently occurred

Two incidents were described, with a possible common feature of inadequate prior consultation between RPSs when transfers of radioactive materials between departments are planned. A reminder was given that this consultation and clear agreement is always essential if transfers are anticipated.

7. Updated guidance available on the Safety Office website

Recently updated or new documents include: guidance on preparing for an EA inspection, the process for 'classifying' radiation workers, and, revised incineration instructions (Addenbrooke's

Hospital Site). Updated guidance and forms for the prior risk assessment process, and revised guidance on record keeping - particularly 'stock' records, will also be available in the near future.

<http://www.admin.cam.ac.uk/cam-only/offices/safety/radiation/ir/forms/index.html>

8. Current work in the Department of Earth Sciences

Dr Ian Farnan presented a summary of research work currently in progress in the Department of Earth Sciences involving the determination of the structural damage that can be caused to minerals as the consequence of alpha-decay of radioactive materials. The research is part of effort to gain a greater understanding of how the structures of materials can be altered and the relevance of this to the development of better ceramics for the long-term storage of radioactive waste.

Next Year -- Wednesday 26th March 2014!

Ideas and suggestions for the 2014 RPS update meeting are sought. It is anticipated that the format will follow a conventional half-day meeting, with the possibility of a buffet lunch following the meeting. Following the largely positive feedback from the meeting this year, we will include a longer and more interactive 'hot topics/forum session in 2014. Please forward any further ideas and requests to David or Lisabeth.

Other update news items

Personal Radiation Monitoring services from Cambridge Personal Radiation Monitoring Service (CPRMS)

You may be aware of an additional service now offered by CPRMS. It will be possible, where an employee is working for two separate employers and is being monitored separately by those employers, then, provided both sets of monitoring are undertaken by CPRMS, *combined dose reports* showing doses received from both employments can be supplied, on a quarterly basis, to both employers – provide both employers agree to this process.

The reasoning behind this offer is that, under the terms of the Ionising Radiations Regulations 1999, employers are required to co-operate, share information (including dose information where relevant), in order that they each can demonstrate that they comply with the requirements of the Regulations, and that the correct decisions are made regarding the possibility of Classification.

Please note that the availability of 'dual-employer reports' does not currently apply to people who are monitored at two separate locations within the same employer (e.g. Department 'A' and Department 'B' of the University).

The above information has recently been sent to RPSs and to Departmental Administrators – together with a request for the names of individuals who are currently be monitored by CPRMS on behalf of more than one employer. *If the situation applies to your department, please ensure that a response is sent to the Safety Office by 10th May 2013.*

A number of problems involving CPRMS services have recently been reported to the Safety Office – these have been discussed with the Service and a summary of their response is reprinted below:

1. Slow speed of assessment of returned badges (and hence significant numbers of badges reported as L)
Badges returned to CPRMS within the first week of a month should be processed and reported back to you with the following distribution of badges, at the end of that same month. CPRMS has already raised concerns about the speed of Mirion's processing. As a result of meetings with Mirion on 26th March, they have apologised and promised to implement much stricter timescales for processing. CPRMS will continue to review this going forward and Mirion are taking this very seriously, in part because of the potential impact on their UK business of not meeting HSE requirements. Accordingly, we think we will see a significant improvement here.
2. Not being able to make contact with CPRMS.
In future, additional cover will be provided which should improve the response to urgent requests.
3. Delays in cancellation of badges.
There is a long lead in time for changes to badge requirements. CPRMS will retain the 1 month's notice period for changes, and will now aim to remove cancelled badges from the packs supplied to customers. This should help to remove any confusion relating to the continued supply of cancelled badges.
4. Badges "re-appearing" on reports sometime after cancellation.
CPRMS has identified a bug in the automatic download software, which for Classified Workers allowed "L" to be entered into previously cancelled badge lines. This has now been rectified.
5. Unexpected reports of 0.3mSv doses and similar.
Some changes to how CPRMS manage background correction may have some impact here. Departments should continue to inform the Safety Office of any unexplained doses (where the badge was essentially unused) and CPRMS will try to track down any common cause/factor in the results.

CPRMS, April 2013

In terms of point 5, above, the Safety Office will continue to review the monthly print-outs and respond as necessary to CPRMS.

Two Day course for Radiation Protection Supervisors- 2013

RPSs are reminded that the annual two-day course will be held on the 17 and 18 July 2013, at the Department of Pharmacology, Tennis Court Road. Although the course is intended for RPSs who have recently been appointed, or 'potential' RPSs, existing RPSs who have not completed this course or who have been in post for many years are very welcome on this course! **If you have not attended this course in the past four/five years**, you really should consider registering for the course this year! The course is organised jointly with the East Anglian Regional Radiation Protection Service (Addenbrooke's Hospital), and places may be booked at the SO website. Further information is available from David Plumb. There is no course fee payable for members of the University, and refreshments and lunches are also provided.

Reminder!

The Safety Office are pleased to be able to offer a short 'road show' on instrumentation and monitoring, and bring our expertise and range of monitors to your department and discuss issues and problems with users of radioactive substances and machines. A number of Departments

have already taken the opportunity to facilitate this presentation. If you think that one or more short (up to ninety minutes) sessions would be useful for users in your department, please do not hesitate to contact Lisabeth or David directly in order to discuss possible arrangements and to arrange suitable venues and times. Alternatively, there is some availability at a session to be held at the Safety Office on Tuesday 11th June – book via Safety Office website.