

University of Dundee

RADIATION SAFETY SUB-COMMITTEE

A meeting of the Radiation Safety Sub-Committee was held at 10am on 5th December 2006 in River Room 3, Floor 9, Tower Building.

Present: Dr David Hewick (DH) [University Radiation Protection Adviser & Convener]
Ms Lisa Grayson (LG) [Minutes]
Mr Damian Leddy (DL)
Mr Martin Rollo (MR)
Ms Julie Smyth (JS)
Mr Ewan Starke (attending on behalf of BE)
Ms Sheila Sharp (SS)
Ms Aileen McLaren (AM)

Apologies were received from Prof Brian Eddy (BE), Ms Allison Bridges (AB), Dr David Sutton (DS), Dr Bob MacKintosh (BM).

MINUTES

Action

1. Minutes of the meeting on 16th May 2006/Matters Arising

The Minutes were approved.

Matters Arising:

All matters arising from the previous minutes were covered under the agenda.

2. New Items for the Agenda

There were no new items.

3. Composition of the Committee

DH expressed concern that with the previous resignation of Dr Peter Taylor and the imminent resignation of Professor Brian Eddy, the research/academic staff would have no representation on the Committee. He said he had approached Professors Peter Downes and Eric Wright regarding recruiting academic members from the College of Life Sciences (CLS) and the Medical School respectively. DH enquired as to whether LG had had any success in identifying a member of research/academic staff in the CLS LG said no-one had been nominated at present but the issue had been raised with Ian Leith. SS said she had discussed the issue with Prof Eric Wright, and said that Prof Wright is happy for her to continue representing their Division and he will continue to give her his full backing and authority. LG suggested appointing a CLS RPS to the Committee, rather than a member of research/academic staff, on the basis that the RPS is on the front-line, dealing with a broad spectrum of end users, Safety Services and SEPA, and no one is more acutely aware of the many issues and problems associated with the use of radioisotopes in the CLS labs. MR's view was that there was a need for research/academic input. DH expressed his disappointment at the apparent reluctance of academic staff to join the Committee and stressed the importance of recruiting senior staff committee members so that they could keep in touch with/influence developments in radiation safety that could affect their working practices. DH said that when he had met with Professor Downes earlier, he agreed that since the Committee was also operating for the benefit of research/academic staff they should be represented on it. LG suggested that, if he feels so strongly about it, DH should

DH
LG

contact Professor Downes and Professor Wright again. DH said he would do this. LG said she would also contact Professor Downes with her views on this issue.

4. Main Campus

a) Single-Site Licence

DH reported that the SEPA Inspector carried out a series of inspections during July 2006 in relation to the Single-Site Licence application. No major problems came to light. The licence application is still under consideration. DH had to resubmit the application with a revised risk assessment for the release of tritium, as well as other radionuclides, from the WTB fume stacks, taking the new building developments into consideration. LG pointed out that there is still some ambiguity as to whether the tritium released is in the form of elemental tritium gas, tritiated water or a mixture of both. LG asked for clarification but the researcher concerned has failed to respond. LG is to get clarification as soon as possible. DH pointed out that, under the terms of the new licence, radioactive waste stores cannot be used for storing anything other than radioactive waste.

LG

b) HASS Registration

DL informed the Committee that, under the High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005 (HASS), licences for other closed sources are also being reviewed. High activity gamma irradiators along with smaller sealed sources will have to be licensed. Unlike previous applications, a detailed site plan is now required showing the exact location of any registered sealed sources. Another key change is that applicants have to indicate how they will dispose of the high activity source at the end of its useful life and confirm that appropriate funds have been earmarked for this purpose. The preferred option is to get the original supplier to agree to uplift the source when required.

Our local Counter Terrorism Security Adviser (CTSA) inspected the gamma irradiator facility in CLS on 1/9/06. The measures specified in the resulting report are currently being implemented. The CTSA will return with the SEPA Inspector in 2007 to carry out a full inspection before the licence is granted.

c) Qualified Expert

The Scottish Environment Protection Agency (SEPA) now requires each site to have a Qualified Expert (QE) on Matters relating to the Radioactive Substances Act 1993. This is in addition to an RPA who is appointed under IRR99 to advise on matters relating to these regulations. Currently, DH fulfils both these roles on the Main Campus, but the plan is for MR to take on the QE role. MR is in the process of compiling a portfolio of work as per SEPA's specification. This will be submitted in due course and MR will assume a QE role in 2007.

d) Example of Point-Scoring System for SEPA Inspections

A copy of a recent SEPA Inspection report demonstrating the new Operator Performance Assessment (OPA) point-scoring system was issued to the Committee members and the key elements explained by DL. MR was confident that all University laboratories will score highly for all six attributes listed, but he did express some uncertainty over the degree of end user involvement in the assessment process and how this might affect the outcome. MR also pointed out that failure will be more evident than it has been previously. LG asked for the OPA system to be introduced to the CLS RPSs at the earliest opportunity and proposed holding an RPS meeting in January 2007 where this and other current issues could be discussed. LG to arrange. JS asked if personnel involved with the inspection had commented on how the OPA exercise compared to previous inspections. DL said that the feedback from these personnel suggested there was no significant difference.

LG

e) James Black Centre (JBC), New Stores

DH informed the Committee that the new stores were nearing completion. DH has grave doubts as to whether there will be adequate space to cope with the waste generated by CLS, especially in light of the proposed DSTT expansion (see item 5). In addition to the new store being smaller than the current one, Safety Services have lost the WTB Aqueous Waste Store and may lose the WTB Scintillation Waste Store. DH expressed his dismay at the lack of consultation on the part of CLS and stressed the need to review plans for the WTB basement area. LG said that she was not familiar with the plans for the WTB basement and did not know what stage the project was at. She also expressed her surprise at the apparent lack of consultation. DH was adamant that, in this instance, he was not consulted but simply told what was going to happen. LG suggested DH contact Ian Leith to discuss this issue further. SS commented that consultation with Safety Services on issues such as this is vital and if there is a problem it should be passed up to the University Safety Committee. MR clarified that, according to Terry Sweeney, the fate of the Scintillation Waste Store had not been decided and it may remain under the control of Safety Services. LG said Ian Leith would be able to confirm this. DH to contact Ian Leith.

DH

f) Laser Safety

DL informed the Committee that he has formally assumed the role of University Laser Safety Officer.

DL has written to the HSE Inspector who carried out the Laser Safety Inspection in December 2005 confirming that all recommendations in the inspection report have been complied with. The process for logging new lasers and new laser users has been updated. The new guidance and forms are not yet available on the web due to a problem with the web server. As soon as this is resolved, relevant personnel will be notified. Only two new users have registered since the inspection. DH thanked DL for the hard work that has gone into improving the laser safety systems and pointed out that the information Safety Services' web site will relate to lasers on the Main Campus only.

DH has discussed laser safety in the Medical School with DS. DH is to arrange a meeting with the Medical Physics Laser Safety Officer (Harry Moseley), DS, DL and JS to discuss laser safety arrangements and the sharing of resources between the Main Campus and the Medical School. JS was very positive about this collaboration and said that material developed for the Main Campus would be adopted at the Medical School and amended as required. JS confirmed that, due to the very low degree of laser usage, there has never been a need for registration forms in the past, but she would be willing to adopt Safety Services forms. JS confirmed that risk assessments and local rules are in place and she would be happy to make these available to DH/DL. DH stressed the importance of being able to demonstrate the competency of Unit Laser Supervisors (ULS). DL has formulated a training matrix that identifies the level of training/competency required by a ULS.

DH/
DL

DL went on to describe a minor problem with the *Limits* software training package demonstrated at the previous Committee meeting. *Limits* was designed using old software/computers and it does not run properly on newer computers with more than one gigabyte of RAM, unless the computer's virtual memory is reconfigured. This is not a difficult operation but it could have adverse effects on other software. DL contacted the *Limits* manufacturer for advice but they were not very helpful. Safety Services are considering lending out a configured laptop to trainees. DL hopes that an upgraded version of *Limits* that addresses this problem will become available in future.

5. MRC Unit

- a) The proposed expansion of DSTT is expected to precipitate a three fold increase in their use of 33P from 2 GBq to 6 GBq per month. A proportionate increase in the volume of solid and scintillation waste produced is expected. DH explained that this, combined with the reduced capacity for storing waste, will demand more regular

removal of higher activity waste. This in turn will lead to a substantial increase in costs. DH said it was important to discuss this impending problem with senior CLS management now rather than waiting until the expansion is complete. DH to contact Ian Leith to discuss this issue. AB is still to submit a completed RADNUC form confirming the estimated waste activities and volumes.

DH
AB

6. Medical School

a) The report prepared by JS is attached (see Appendix A). There have been no new issues or significant changes since the previous report.

b) HASS Registration

DH raised the issue of the licence application for the Medical School gamma irradiator, pointing out that the application fee will increase substantially during 2007. JS said the application will be submitted well before the official September 2007 deadline.

c) Centre for Clinical Research

DH asked if the Centre would be completed by Spring 2007. JS did not know if the project was still running to schedule and had nothing new to report. The issues of funding, staffing and the division of responsibility between the NHS and the University have still to be finalised. DH asked if new certificates would be required. JS was hopeful that the current certificates would cover the predicted radioisotope use.

d) Translational Medicine Research Centre

JS has no information on this facility with regard to intended radioisotope use. LG explained that Ian Scragg had met with the manager of the TMRC unit, Steve Moore, before the unit was up and running, to discuss health & safety issues and there was no intention to work with radioactivity at that time. Whether this will always be the case LG could not say and she advised DH to contact Steve Moore directly. If any radioactive work is to take place at the Ninewells site, JS will require a formal statement of predicted radioisotope usage.

DH

e) Laser Safety

This was covered in item 4f.

7. RPS Matters

a) Guidance for Campus RPSs

Copies of the *Guidance for Radiation Protection Supervisors* document, produced by DL, were issued to the Committee members. DL explained that the document highlights the differences between the regulatory specification and what is expected of a Main Campus RPS in reality and identifies the training an RPS should receive in order to be considered competent to do the job. SS asked if the first sentence in the section headed *Transport 2002* could be amended to read "moved off site" rather than "moved off campus". DH was happy for JS to amend the document as necessary in order to suit the Medical School. LG pointed out that the RPS training detailed in the document is no different to what is currently available, despite the fact that the requirement for additional RPS training was acknowledged at the previous meeting. DL and MR confirmed that some additional training material is being developed. SS asked what the "specific tutorial" delivered by Safety Services consisted of. MR said it took the form of an informal talk with the trainee RPS covering the key things they need to be aware of. LG asked if the tutorial could be formalised to ensure consistency. DL said this was his intention but it had not been done yet. JS offered to show MR and DL the tutorial she has produced and proposed that they work together on a draft tutorial for presentation at the next Committee meeting. MR and DL thanked JS for her offer and agreed to take this forward. LG asked Safety Services to ensure

MR/DL
/JS

that the standard of training provided to RPSs is at least equivalent to that now provided to ULSs.

8. Waste Disposal

a) Costs

JS informed the Committee that the company contracted to uplift radioactive waste from Ninewells is proposing to change from charging by volume to charging by the MBq. JS and DS are analysing previous records to see how this might impact on costs. MR said that the contractor in question – Sterile Technologies Group – also service the Main Campus and are already charging by the MBq. DH explained how the current “store and decay” system keeps disposal costs down and stressed, yet again, that the reduced capacity for storing waste will rule out longer term storage and lead to a significant rise in costs. LG pointed out that the financial argument will only work if it has a direct impact on the research groups and, as stated previously, the space issue would have to be discussed at a higher level.

The updated waste disposal costs are given in Appendix B.

9. Additional Agenda Items

There were no additional items.

10. Date of Next Meeting

The next meeting of this Committee will be held in the same venue, if possible, on Tuesday 15th May 2007 at 10am.

Appendix A

UNIVERSITY OF DUNDEE RADIATION SAFETY SUBCOMMITTEE DEC 2006 UPDATE ON RADIATION PROTECTION IN MEDICAL SCHOOL

UNSEALED SOURCES

SEPA Inspections

No SEPA inspections have been carried out since last meeting (May 2006).

Change to Radiation Protection Personnel

Alex Sandison, NHS Physicist, is now responsible for the routine management of two departments in the Medical School: Biomedical Research Centre and Surgery & Molecular Oncology. Alex also participates in other aspects of the radiation protection service, such as staff training.

Staff Training

Since last meeting in May 2006:

- (i) Radioisotope Users Course has been held once in Medical School with a total of 16 attendees.
- (ii) Induction talk has been given on 3 occasions to 4 staff.
- (iii) Radiation safety tutorial has been given to 1 staff who has not had adequate training or experience. This allows them to work under supervision prior to attending RIUC.

Routine Duties

Includes monthly waste returns, RPS monthly meetings, contamination monitor calibrations and monitoring of staff.

Registration of Staff Using Unsealed Sources

There are currently 125 staff on Medical School RADPER database.

Staff Doses

Summary of 2006 doses will be available at next meeting.

SEALED SOURCES

Instrument Sources

There is no change to the Radioactive Substances (Testing Instruments) Exemption Order 1985 inventory since last meeting (May 2006).

NON-IONISING RADIATION

Inventory for Non-Ionising Sources

Some additional sources have been added to the 2006 inventory (November 2006).

Risk Assessments for Non-Ionising Sources

Hazards to be identified & risk assessments made for the new sources.

X-RAY SOURCES

X-ray Irradiator in Medical School Resource Centre

Radiation Protection review to take place 12/12/05.

Julie Smyth
Radiation Physicist
01/12/06

Appendix B

Annual Campus/Ninewells Radioactive Waste Disposal Costs

Campus [calendar year]		Ninewells [financial year]	
Year	Cost	Year	Cost
2002	20,508		
2003	12,684	2002/3	20,961
2004	12,122	2003/4	22,547
2005	6,399	2004/5	20,250
2006*	8,385	2005/6	20,545

* up to September 2006