



May 2005

RADIATION PROTECTION NEWSLETTER

To all our RPA customers:

NDT MainCal is again pleased to report significant growth in the Radiation Safety sector of our business. Some recent developments have been our appointment by Royal Mail as their corporate RPA, and also a major contract within the prison service. RPA services for cargo-scanning facilities and school science departments are also developing areas for us. We recently welcomed a new member of staff, Manuel Campos, who is undergoing training in certain areas of our radiation protection service. So, to be honest, we are feeling quite pleased with ourselves. But before we get too big-headed, we always remember that without you, our customers, we cannot survive! So once again, thank you for your support and especially to many of you who have been happy to recommend us to others.

HSE Speak to Site Radiography 'Clients'

In January of this year the *Health & Safety Executive* staged a one-day seminar for major clients of companies that carry out site radiography. About 60 companies were represented, the names apparently having been gleaned from 7-day notification forms sent to HSE. NDT MainCal requested and was given an invitation to the meeting, which was held at HSE's Rose Court offices in London.

The presentation focused on good practice of site radiography, with particular emphasis on adequate planning and risk assessment. Companies were informed about what they should expect to see taking place during site radiography and how the work should be managed. Other topics included types of equipment typically used, how controlled areas should be set up, what information should be exchanged between the site controller and radiographers, and how the HSE enforce the regulations. The requirement for 7-day notification was clearly explained, and the companies present were strongly urged to allocate sufficient time and resources to allow for this period and use it to carry out a thorough risk assessment. One very interesting recommendation was that the client should carry out a radiation safety audit on the radiography company – HSE even provided everyone with a copy of a comprehensive audit form to facilitate this! The issue of transportability of items was also addressed, and again the client's responsibility to plan for the cost and time taken to transport items to a fixed enclosure was emphasised.

All-in-all, our opinion is that this approach by HSE should benefit the NDT industry; it will certainly help site controllers to understand some of the things that radiographers insist on, and it will drive home the fact that radiography done without adequate planning and sufficient resources to ensure safety is not acceptable. It should also discourage clients from just going for the cheapest quote every time because as we all know, 'cheap' rarely equals 'safe'. One should be able to sell oneself on safety record, not just price. It will be interesting to see how HSE carry this initiative forward in the future.

European Commission to 'Simplify' Reporting Procedures

If you keep radioactive sources in depleted uranium (DU) containers (most portable Tech-ops and Gammamat containers, for example), you are probably aware that for some time use and storage of DU has been controlled by a European directive. The objective is that every bit of DU in the EU should be registered and tracked! For NDT companies, and those that use equipment such as level and moisture gauges with DU shields, the paperwork can appear to be a nightmare. This is partly because the whole system of control was designed around the nuclear industry, which involves complex processes and sometimes large stocks of nuclear material. Unfortunately, 'small users' come under the same set of rules and have to comply, even though it can at times seem unnecessarily 'bureaucratic'.

For those of you who find yourselves baffled by the world of inventory listings, change reports and derogation, the good news is; *help is at hand!* Firstly, Europe has decided to simplify the requirements for 'small users'. A straightforward yearly report should be all that is required, so long as you keep proper records of containers that you either acquire or dispose of. Secondly, the DTI, who manage the reporting system in the UK, are holding a seminar for small users; this will be held in London on 28 June. Some of you might have received an invitation from the DTI already. You are strongly urged to attend, but if you can't make it, have no fear! We will be going, and we will feed back all the relevant details to you.

The best source of help, however, is the DTI itself. The DTI Safeguards Office in London runs the show, and the lovely Miss Minder Louie is always ready to answer all your difficult questions! (sorry Minder, but that's what you said!) She can be contacted on 020 7215 0743 or email Minder.Louie@dti.gsi.gov.uk. You will find the staff at the office very helpful, and more than capable of translating 'European Legalese' into plain English!

HASS Directive

For a some time now, we have been tracking the progress of the new *High Activity Sealed Source* (HASS) Directive. The document is still in the consultation phase, however the final date for comments is 17 June 2005, so it will soon pass to the final phase of being finished and implemented. The full text of the consultation, if you wish to read all 119 pages of it, can be downloaded at:
www.defra.gov.uk/corporate/consult/hass-directive/consultation.pdf

Some key points are as follows:

- The directive will affect most holders of industrial radiography sources: The threshold for Ir-192 is 10 GBq (0.27 Ci) and for Co-60, 4 GBq (0.1 Ci). This is the activity when the source was first manufactured or sold.
- It will be implemented as a series of amendments to the Radioactive Substances Act 1993 and will be administered / enforced by the Environment Agency
- It will require registration and authorisation for each individual source, not just a quantity of sources as at present. Each source will have to be accounted for, as is currently the case, but there may be a requirement for regular reporting to the Environment Agency.
- Holders will be required to make financial provision for disposal of the source; the means of achieving this is yet to be decided but it seems likely that a payment will have to be made into a central fund, which will be used to cover the cost of disposal of 'orphan' sources and situations where the holder is insolvent or has gone out of business.
- For purchases of new sources, the requirements of HASS will apply immediately from 1 January 2006.
- Holders of sources manufactured or bought before 1 January 2006 will have a transition period until 31 December 2007 to comply.
- One way or another, the cost of keeping a source will go up; the Environment Agency will be looking to recover the additional administrative costs, and where the source supplier is deemed to be the 'holder', he will obviously be looking to pass the cost of the disposal provision on to the user.

We will continue to keep you informed of any further developments.

Routine Function Checks and Monitoring

Whether you are using X-ray baggage scanners, industrial X-ray units, or gamma equipment you will know that when we make our annual visit to you we will usually 'bang on' about routine checks of interlocks, warning lights, alarms etc. and routine monitoring around exposure areas, machine surfaces etc. to check for leakage. We make no apologies for this – we wouldn't be doing our job if we didn't. We are often asked "why bother, when nothing changes?" – not an unreasonable question. Apart from the ACOP requirement, we'd like to mention two incidents that highlight the 'hidden' importance of doing this:

The first one concerns a typical X-ray enclosure with a sliding door, however the door in question was quite large and heavy. The design of the door was such that it stopped against the corner pillar of the enclosure. The continued action of closing the door had gradually moved the lead shielding inside the corner pillar

and gaps had appeared. The only way that the problem came to light was through monthly monitoring; the RPS noticed a gradual rise in dose rate at certain points on the surface at the corner of the enclosure. Careful investigation showed that some quite significant radiation leakage was taking place. Had the RPS been careless about monitoring, or even worse not done it, then the shielding could have continued to deteriorate resulting in risk to radiographers; the leakage point happened to be close to the control panel, which was where the operator habitually stood during exposures.

The second incident concerns a radiographer who, without realising it, left his TLD badge in an X-ray enclosure during an exposure, which obviously brought about an unusually high dose when the badge was processed. During our investigation, we looked at the routine checks on the interlocks and warning systems – they were complete, regular and up-to-date. This demonstrated that exposure of the badge while he was wearing it was virtually impossible, as he could not walk into the enclosure while an exposure was in progress without triggering the door interlocks, which the records proved were working. We also looked at the monthly monitoring records; again they had been properly completed and showed that the external dose rate never exceeded 1 μ Sv/h. This demonstrated that he could not have received an exposure while standing outside the enclosure. The only reasonable conclusion was that the badge had been exposed, not the wearer.

The lessons are 1) Routine checks and monitoring *can* show up problems, even if you think nothing can change and there is no risk. 2) These checks are your *evidence* that you are not exposing people to higher doses than are necessary or safe. Even though you may not need to use that evidence for months, maybe longer, it becomes vital if something goes wrong and you have to do an investigation. Furthermore, for users of equipment like X-ray scanners and cabinets, where operators are often not subject to personal dose monitoring, this evidence is very important as it justifies your decision not to make everyone wear badges.

So please do the checks and monitoring. Don't be complacent, and don't get into the habit of not bothering and then filling the book in when the RPA visit is due (you know who you are!!). Remember that the benefits of safety precautions are rarely obvious, and even though things don't often go wrong the potentially serious consequences if they do make it worth the effort.

Our very best wishes to all of our customers

A handwritten signature in black ink that reads "S. Wright RA". The signature is written in a cursive style with a large loop around the "S".

Simon Wright
PRINCIPAL RPA

A handwritten signature in black ink that reads "S. Boocock RA". The signature is written in a cursive style with a large loop around the "S".

Steve Boocock
ASSISTANT RPA