



NDT MainCal Limited
www.maincal.com

Radiation Protection Services



Unit 2 Dale Road • New Mills • High Peak • Derbyshire • SK22 4NW
Tel: 01663 742549 • Fax: 01663 746837 • Email: rpa@maincal.com

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RADIATION PROTECTION NEWSLETTER

To all our RPA customers:

When you speak to a customer, as a matter of courtesy you tend to ask 'are you busy at the moment?'. It seems to us at the present time that the only answer is 'yes'! Certainly that appears to be the case with the various business sectors that we're involved with, and it's no different for us here at MainCal. As well as growth in our RPA client base, our calibration division is doing very well, and we've recently added a new string to our bow by becoming the UK agent for Techna NDT, an American company manufacturing NDT probes, reference standards and accessories. For those of you in the NDT sector who may be interested, you can download the catalogue from the website www.technandt.com. Contact our office for prices and availability of all products (Tel 01663 742549 or email admin@maincal.com).

On to RPA matters, and we'd like to share with you some news and a few issues that have emerged over the last six months or so.

New training courses available

We are very pleased to announce that two new training courses are now available, in addition to our existing RPS and HASS courses;

Training for drivers of vehicles carrying Type 'A' sealed sources

This course includes an overview of the transport regulations, classification of sources, labelling of packages, placarding of vehicles, transport documents, driver responsibilities, security requirements and contingency plans.

Contingency plan training; non-return of a gamma source to its container.

This course deals with causes and prevention of non-return, emergency equipment, immediate actions, stay time calculation, written plans, reporting of incidents, and a practical session on source recovery.

Both courses are available for delivery on our customer's premises. As well as providing training (with a certificate) for those involved, the courses will serve as a 'health check' on your procedures and equipment so that necessary improvements can be made if needed.

Please contact us for further details.

Transport of radioactive materials

The 'Radioactive Material (Road Transport) Regulations 2002' (known as RAMRoad) will be replaced in July 2007 by the 'Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007'. Quite a mouthful isn't it? We will refer to the regulations as CDG 2007 for the sake of brevity. You'll be able to download CDG 2007 from www.opsi.gov.uk when it's officially issued.

The impact of the change for 'small users', such as industrial radiography companies, is not expected to be very onerous. Here's a brief summary of what's involved;

- CDG 2007 is for all classes of hazardous goods and covers transport by road, rail and water. As far as transport by road is concerned, it invokes the relevant parts of the 'ADR' regulations (known as the 'Orange Book') which have been in force for some time. You can download ADR 2007 using this link:

<http://www.unece.org/trans/danger/publi/adr/adr2007/07ContentsE.html>

- There are no changes to the maximum activities of sealed sources commonly used for industrial radiography (Ir-192, Co-60, Se-75 etc.) that can be transported as a 'Type A' packages.
- The requirements for radiation protection and quality assurance programmes still apply
- There are more specific requirements for driver training (which we can help with – see above) and security.
- References to RAMRoad 2002 on transport documents (consignment notes etc.) will need to be removed.
- Derogations such as using fireproof plates as an alternative to orange ADR plates (under certain conditions) are included.

These and other changes will be discussed with you during our routine visits, but if you have any questions in the meantime contact the Department of Transport (Dangerous Goods Division) on 020 7944 2744.

Contingency plans and emergency equipment

A fundamental requirement of IRR99 is to produce contingency plans to deal with 'reasonably foreseeable' incidents. Everyone who works with radiation equipment should be fully aware of the contents of contingency plans and know precisely what to do in the event of an emergency.

The problem is that because real incidents are relatively infrequent, there is a tendency to become complacent. Information that is rarely used is quickly forgotten. Unless instructions are periodically refreshed in people's minds, procedures may not be fully complied with in a genuine emergency, leading to all kinds of problems.

For some emergencies, such as radiography using gamma sources, special equipment is essential to deal with the situation. Again, because incidents are not common, there is a very real danger that such equipment may not be available at the work location, has fallen into disrepair, or items are missing.

Recent HSE inspections have revealed some worrying deficiencies in this regard, so we feel it is pertinent to share some recommendations:

- All employees who operate radiation equipment (of any kind) must ensure that they fully understand what they should do in the event of foreseeable incidents identified by the risk assessment. This would normally form part of their initial safety training.
- To the extent practicable, contingency plans should be practiced. At the very least, during training, the various scenarios should be run through and the planned responses tested to ensure that the procedures actually work. Where there are 'gaps' or anomalies in the plans, be quick to amend them.
- Incidents have a nasty habit of occurring at the most unexpected times, under the most difficult circumstances, and when people aren't immediately available to deal with them. Ensure that your plans are robust enough to keep a situation under control if things go wrong or delays occur.
- Refresher training should be carried out at appropriate intervals, perhaps annually. The format of refresher training may range from a 'toolbox talk' in the case of lower risk equipment like X-ray scanners and analysers, to a full rehearsal for gamma source recovery. All such training should be recorded.
- Where contingency plans involve use of emergency equipment, the emergency kit should be checked periodically for completeness and serviceability of the items in it. A checklist and inventory should be utilised.
- Where appropriate, an RPS (or other senior figure in the organisation) should carry out periodic safety audits to ensure that the above requirements are being complied with.

Above all, beware of developing an 'it will never happen' attitude. While there is much that can be done to prevent incidents, they can never be ruled out – that's why they are in the risk assessment!

Unexpected results from personal dosimeters

In our May 2006 newsletter, we discussed how to handle a situation where you know in advance that there is likely to be an inaccurate reading on a dosimeter (e.g. it's been dropped in a controlled area or damaged). Naturally, this will not always be the case; you may send a dosimeter off to the ADS as normal, expecting a zero or very low reading. Then the report arrives back showing several mSv, even worse - a dose above the legal limit for the employee concerned, or worse still a medically significant dose.

There are a number of issues raised by such an occurrence, and we can't discuss all of them in this brief article; instead here are a few pointers:

- You may have an inkling of what the problem might be; a difficult site radiography job or a particularly busy period of work. Without jumping to conclusions, follow your procedure for internal investigation and attempt to isolate the likely cause(s). Depending upon the trigger levels in your local rules, you may need to ask your RPA to supervise the investigation.
- If the dose recorded is above the legal limit, or it causes an employee's cumulative dose for the year to exceed this limit, you are obliged to inform the HSE. You will need to begin a detailed investigation and you must consult your RPA regarding this.
- If the dose is medically significant (100 mSv or above) then you should speak to your appointed doctor to arrange a chromosome aberration test for the employee concerned.
- At some point during your investigation you may become convinced that the employee has not received the dose that has been recorded. You have a responsibility to justify this conclusion, and to estimate the dose that should be attributed. This could involve gathering records, comparison with doses to other employees, or even reconstruction of a particular event using a 'clean' dosimeter. If there is sufficient evidence, and if the difference between recorded and estimated doses is significant, you can request a 'special entry' in the person's dose record. If a dose limit has been exceeded, then the HSE need to approve this entry. More details of this procedure can be found on the HSE website at: www.hse.gov.uk/radiation/ionising/doses/560-43.pdf

In summary, your approach should be to assume that the recorded dose is genuine unless you have solid evidence to indicate otherwise. There may be situations where you can't establish with certainty how the high reading has occurred, but you've got enough evidence to demonstrate beyond reasonable doubt that the individual has not received the dose recorded. This emphasises the importance of proper record keeping, effective monitoring of controlled areas and regular safety system checks, as these will form a big part of the evidence you need.

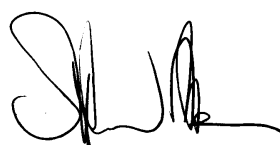
Notifications under IRR99 Regulation 6

Finally, just a quick point of clarification on something we're quite often asked about: Form IRR3 (www.hse.gov.uk/forms/notification/irr3.pdf) should *only* be used for 7-day notifications of *site radiography* under IRR99 regulation 6(3). If you're providing HSE with a 28-day notification under regulation 6(2), e.g. use of equipment for the first time, then you should write a letter to your local HSE office giving the details set out in IRR99 Schedule 2 (page 138 of 'Work with ionising radiation').

Our very best wishes to all of our customers



Simon Wright
PRINCIPAL RPA



Steve Boocock
ASSISTANT RPA