

# The International Conference on the Security of Radioactive Sources

## Findings and Implications

In the aftermath of the terrorist actions of 11 September 2001, new concerns have emerged regarding the potential use of radioactive sources for malevolent purposes. At the 2002 International Atomic Energy Agency (IAEA) General Conference it was agreed that an international meeting should be held to promote information on, and raise governmental and public awareness of key issues relating to the security of high-risk sources. Further intentions were to foster the better understanding of the measures necessary to improve the security of such sources and enhance preparedness for radiological emergencies. As a result, the International Conference on the Security of Radioactive Sources was held at the Hofburg Palace in Vienna from 10-13 March. The conference had over 650 attendees from 115 countries.

The conference produced three major findings:

- So-called 'orphan sources' (ie, those not under strict control) present serious security and safety concerns internationally, and therefore a global initiative under the control of the IAEA is required to identify and secure these at-risk radioactive materials.
- National regulatory requirements should be extended to make the creation of safety and security plans mandatory as a condition of purchase, ownership and use of radioactive materials.
- A Code of Conduct on Safety and Security of Radioactive Sources be developed that becomes binding upon State Parties and all elements within their jurisdiction.

These findings will have significant implications for owners and users of sources worldwide, including New Zealand where a change to the legislation would be required. Given these findings, the present review of legislation is timely.

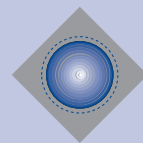
In the event of these findings being fully implemented, the major implications for owners and licensees would include:

- The need for formal and notifiable organisational safety, security and emergency response plans, as a requirement of license.
- Compulsory registration of sources.
- Demonstrable minimum levels of operator competence.
- The establishment of some form of personnel screening programme to ensure 'trustworthiness' as a prerequisite of licensing.
- Identified and documented disposal routes for unwanted sources, including mechanisms for return to manufacturers.

It is also envisaged that the powers of entry of the regulatory authority would be increased, along with substantially increased penalties associated with non-compliance.

The National Radiation Laboratory is presently considering how some of these requirements can be implemented under the framework of the present legislation, and will be moving to introduce appropriate measures as soon as practicable.

For more information contact Jim Turnbull (Jim\_Turnbull@nrl.moh.govt.nz).



**NRL**  
National Radiation Laboratory

# The Source

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## A review of the radiation protection legislation



### Progress

The last issue of *The Source* contained an announcement that NRL had clearance to publish a discussion document on the review of the New Zealand radiation protection legislation, and asked for submissions from interested parties. The consultation period has closed and a number of submissions have been received. NRL would like to thank all people who made submissions.

The next step in the process is a detailed analysis of the submissions from which a summary document will be produced. This document will be sent to all parties who made submissions along with individual responses where appropriate. The majority of the submissions were strongly in favour of drafting a new Act. Therefore once we have completed the analysis we can move to the next stage in the process.

This involves writing a policy paper that will contain a proposal for a new Act along the lines that are generally supported by the majority of submissions. The policy paper will be developed by the Ministry of Health in consultation with other government departments, and will be presented to the Social Development Cabinet Committee (SDC). The policy that is signed off by the SDC will then form the basis for drafting instructions that will be used by the Parliamentary Counsel Office to draft a new Bill ready for presentation to Parliament.

*The Source* will provide readers with regular updates on progress and details of any further opportunities for making submissions on the new legislation.

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## Dental drill takes a break

The "Dental Drill" takes a break from this issue of *The Source*. Regular readers can rest assured that the series will return in the next issue, with continuing advice on radiation protection in the use of x-rays for dental diagnosis.

## News for licensees

### Improved Notification of Sale of Irradiating Apparatus form

The NRL Notification of Sale of Irradiating Apparatus form has been revised. The new form (V4.03) can now be found at NRL's website (<http://www.nrl.moh.govt.nz>) in either the Legislation & Licensing section, or as part of an updated NRL Matters No. 8 March 2000, or can be obtained by contacting NRL directly. Please use the revised form to notify NRL of any sale (including transfer, loan or disposal) of irradiating apparatus. To satisfy Radiation Protection Act obligations, the principal licensee/owner must submit the form immediately upon sale.

Please note that when writing down the make, model and serial number of the irradiating apparatus, you should record these details as listed on the control panel information plate. If this plate is missing, record 'missing' on the serial number line and then record any other ID tracking numbers and the corresponding component.

For more information contact Mark Dirksen ([Mark\\_Dirksen@nrl.moh.govt.nz](mailto:Mark_Dirksen@nrl.moh.govt.nz)).

### Licensing of all chiropractors

A licence granted under the *Radiation Protection Act* is solely a "user's" licence (rather like a driving licence). Any person who is independently using a source of radiation must have a personal licence. While the *Act* allows some persons to act under the supervision or instructions of a licensee, it does not allow one professional to hold a licence, with his or her professional peers working "under that licence". In the past it has been accepted that only one chiropractor in a practice needed licensing, but it is now necessary for chiropractic to be brought into line with other professions. An outline of the requirements will soon be sent out in *NRL Matters No. 14*.

For more information contact Peter Cartwright ([Peter\\_Cartwright@nrl.moh.govt.nz](mailto:Peter_Cartwright@nrl.moh.govt.nz)).

### Storage of irradiating apparatus

Under normal circumstances responsibility for safe care of irradiating apparatus not in current use would belong to a person licensed under the *Radiation Protection Act*. Such irradiating apparatus would be stored in a manner that is secure and prevents inadvertent use of the unit.

However, occasions can arise where there is no longer a licensee associated with a given facility that uses irradiating apparatus. At this point the owner of the irradiating apparatus assumes responsibility for appropriate storage. This period of owner responsibility is an interim measure to allow the owner to decide on future needs with respect to the irradiating apparatus. Options are: arranging for a new person to become a licensee, selling the irradiating apparatus if it is no longer needed, or disposing of it. In the case of disposal, the irradiating apparatus must be rendered inoperative in such a way that it would not be practicable for someone to restore the unit to a condition where it was capable of producing radiation.

NRL considers that 90 days should be sufficient time for the owner to enact one of these options. *NRL Matters No. 13* is being produced to provide advice on storage of irradiating apparatus. It will be available on our website and copies will be posted as required.

## Like a moth to the flame . . .

The NRL is involved with the fight against Auckland's painted apple moth infestation by irradiating batches of male painted apple moth pupae to induce sterility. The work, contracted by the Ministry of Agriculture and Forestry (MAF) through HortResearch, is part of the well-publicised programme to attempt to eradicate the moth in Auckland before it can ravage indigenous forests and the forestry industry.



The moth pupae are irradiated using gamma rays from a radioactive Co-60 source. The equipment used is in fact the same equipment that NRL uses to calibrate the film dosimeters that many readers will be familiar with from the NRL personal dosimetry service. Each batch of moths receives approximately 100 Gy of radiation, which is many times the amount that would be needed to kill a human. This amount renders not the moths themselves sterile, but produces a high percentage of sterility in their offspring which will eventually lead to a reduction in the population. The treated moths are then released in the Auckland area as part of a programme co-ordinated between HortResearch and MAF.

## Transport of radioactive material: free seminars

In recent months there have been a number of incidents involving the transport of radioactive material. The incidents have been minor in nature, but have demonstrated that there is a lack of awareness amongst some organisations and personnel involved in the carriage of radioactive materials.

In most cases the incidents were related to delays in the transport of packages and an inability to account for the whereabouts of the packages in a timely manner. Such incidents are of concern because if packages cannot be accounted for they are assumed to be lost or stolen, which may lead to a full scale emergency response. One incident in December led to the national radiation incident response plan being invoked. At a North Island east coast depot, a member of staff reported a "leaking radioactive package" and complained of symptoms of "tingling lips and fingers". The incident scene was attended by the local Health Protection Officer who performed radiation measurements, and in consultation with NRL was able to offer advice and reassurance. The package was found to be intact and the apparent leak was actually rain water.

NRL is planning to hold a number of seminars for "radioactive material transport users" in each of the main centres later this year. The seminars are open to anyone involved in the transport of radioactive material with the aim of raising the general awareness of the requirements and regulations for the safe transport of class 7 materials. Attendance at the seminars will be free of charge.

To register your interest, please send an email to Cris Ardouin at [Cris\\_Ardouin@nrl.moh.govt.nz](mailto:Cris_Ardouin@nrl.moh.govt.nz) indicating your preferred location (Christchurch, Wellington or Auckland).

## NRL's Environmental Laboratory achieves accreditation to NZS/ISO/IEC 17025

NRL is pleased to announce that its Environmental Laboratory has recently achieved accreditation to NZS/ISO/IEC 17025 (general requirements for the competence of testing and calibration laboratories) through International Accreditation New Zealand. Accreditation was achieved following a comprehensive document review and an exacting on-site assessment. IANZ is the national authority for the accreditation of testing laboratories.

Accreditation by IANZ is an internationally agreed process for assuring users of a testing service that the technical competence and effective quality control processes of the accredited organisation is of the highest standard.

The Environmental Laboratory's scope of accreditation includes the radiochemical assay of radioactivity in water samples, gamma nuclides in environmental samples by gamma spectrometry and the testing for the radionuclide contamination of surfaces.

The Environmental Laboratory's Accreditation complements NRL's existing certification to AS/NZS ISO 9001:2000 (quality management systems - requirements).

For further information contact Riitta Pilviö ([Riitta\\_Pilvio@nrl.moh.govt.nz](mailto:Riitta_Pilvio@nrl.moh.govt.nz)) or Tony Cotterill ([Tony\\_Cotterill@nrl.moh.govt.nz](mailto:Tony_Cotterill@nrl.moh.govt.nz)).