



Australian Government

**Australian Radiation Protection
and Nuclear Safety Agency**

**QUARTERLY REPORT
OF THE
CHIEF EXECUTIVE OFFICER
OF ARPANSA
FOR THE PERIOD 1 JULY TO 30 SEPTEMBER 2005**



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Further Information About This Publication

If you would like to know more about the content of this publication please contact ARPANSA's Manager Policy and Security of Sources on 1800 022 333 or e-mail at info@arpansa.gov.au. Further information about ARPANSA can be found on the Agency's website at www.arpansa.gov.au.

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Letter of Transmittal

16 February 2006

The Hon Christopher Pyne MP
Parliamentary Secretary to the Minister for Health and Ageing
Parliament House
Canberra ACT 2600

Dear Parliamentary Secretary

The *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act) requires the Chief Executive Officer of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) to submit to the Minister, at the end of each quarter, a report on:

- the operations during the quarter of the CEO, ARPANSA, the Radiation Health and Safety Advisory Council (the Council), the Nuclear Safety Committee (the NSC) and the Radiation Health Committee (the RHC);
- details of any direction given by the Minister to the CEO under Section 16 of the Act;
- any breach of licence conditions by a licensee, of which the CEO is aware;
- all reports received by the CEO from the Council and the NSC under paragraph 20(f) or 26(1)(d) of the Act; and
- a list of facilities licensed under Part 5 of the Act.

I am pleased to provide you with a report, meeting the requirements of the Act, covering the period 1 July to 30 September 2005.

As you would be aware, Section 60(6) of the Act requires you to cause a copy of the report to be laid before each House of the Parliament within 15 sitting days of the day on which this report was given to you.

Yours Sincerely

John Loy
CEO of ARPANSA

Report on the operations of the CEO and ARPANSA

Following are the highlights of ARPANSA's operations over the past quarter.

Knowledge, information and services

Pilot Solar UVR Exposure Study - Australian Antarctic Division

A pilot study of solar UVR exposure of Australian Antarctic Division (AAD) personnel during the resupply voyages to Casey, Davis and Mawson was undertaken over the summer of 2004/05 and analysis has been completed. An additional expanded study is planned for the 2005/2006 summer with 300 UVR badges provided to AAD.

Medical Exposures

The Code of Practice and Safety Guide for Diagnostic and Interventional Radiology is at an advanced stage of development with substantial input from ARPANSA. The Code has been accepted in principle by the RHC and a Regulatory Impact Statement is being developed. ARPANSA has also contributed to the development of responses to public comments, and to making appropriate changes to the 'Code of Practice and Safety Guide for Radiation Protection in Dentistry'. The first draft of the Code of Practice and Safety Guide for Radiation Protection in Nuclear Medicine was submitted for comment by the RHC at the July 2005 meeting.

The multidisciplinary working group on diagnostic reference levels (DRLs), of which ARPANSA is a member, has met and has requested formal acceptance from the RANZCR representative of a set of interim national DRLs which was decided on by the group.

Result from the national survey of radiation doses from general radiology are being collated for publication and organised for presentation at the EPSM 2005 conference in Adelaide.

Public Education

The website is averaging more than 41,500 visitors per month. The topics of most interest are mobile phones, health affects of radiation, radiation safety codes and standards and basic radiation science.

National leadership in radiation protection and nuclear safety

United Nations Committee on the Effects of Atomic Radiation (UNSCEAR)

The Committee provides fundamental and authoritative advice on the sources and effects of ionising radiation. A senior ARPANSA officer holds an appointment to the Committee as Australia's representative and attended the 53rd meeting which focused on medical radiation exposure, epidemiology of radiation and diseases, effects on the immune system and occupational and public exposures. At the conclusion of the meeting, Australia's representative was elected to the position of Chair for the 54th and 55th meetings of the Committee.

Radioactive Material Security and Emergency Preparedness

ARPANSA attended a joint Australian Nuclear Science and Technology Organisation (ANSTO) and International Atomic Energy Agency (IAEA) workshop in Sydney on

the physical security of radioactive sources from 29 August until 1 September. The workshop provided enhanced knowledge and skills to support efforts to secure sources from the threat of malicious use.

ARPANSA prepared an initial inventory of Category 1 and Category 2 radioactive sources, as defined in the draft *ARPANSA Code of Practice for the Security of Radioactive Sources*, for inclusion in the National Register that the Agency is establishing.

An emergency exercise named “Phoenix” was held at ANSTO on 15 September 2005. ARPANSA participated in the exercise as an observer and an umpire. The exercise involved a fire in the loading bay of ANSTO Radiopharmaceuticals and Industrials premises. The exercise did not involve any radioactive release and the prime objective was to test the co-ordination of responses from the emergency services and ANSTO.

ARPANSA attended training in New South Wales’ emergency management arrangements at the State Emergency Services Centre, Heathcote. In addition, ARPANSA officers contributed to a training course for NSW Emergency Services personnel.

National Strategy to Address Orphan Radioactive Sources

In considering the implementation of the IAEA *Code of Conduct on the Safety and Security of Radioactive Sources*, the National Uniformity Implementation Panel (Radiation Control) established a working group to develop a national strategy to prevent loss of, and regain regulatory control of, orphan sources in Australia.

The NUIP(RC) also agreed that glow in the dark keyrings containing tritium served no safety purpose and import of them into Australia should not be permitted.

Regulation of the Commonwealth’s uses of radioactive material, apparatus and facilities

Nuclear Installations

ANSTO - HIFAR Reactor Operations (Facility Licence F0044-4A)

On 25 July the CEO received the quarterly report for the period 1 April to 30 June 2005, in accordance with a condition of licence. HIFAR continued to operate safely during this reporting period.

Staff Changes

HIFAR Operations recruited and trained six new operators during the reporting period. The existing personnel also undertook a refresher course and additional training. Training for OPAL Reactor, in which some HIFAR operating personnel are participating, is currently taking place. ARPANSA will maintain its focus on the adequacy of HIFAR resources for safe operations during the lead up to OPAL operations.

Operational Limits and Conditions

In June 2003, ANSTO sought approval of the CEO of ARPANSA for proposed revisions to update the set of Operational Limits and Conditions (OLC). These limits

and conditions set the safe operating envelope for the reactor. Many of the proposed revisions related to the introduction of low enriched uranium fuel in the reactor and were approved in June 2004. The CEO approved others of the proposed revisions during this reporting period. ARPANSA officers are now working on finalising this matter.

Special Licence Conditions

Following a number of ARPANSA inspections of HIFAR operations to assess compliance with Special Conditions imposed on the HIFAR Licence, the CEO removed all but one of the HIFAR Special Licence Conditions. The remaining Special Condition relates to any proposed operation of HIFAR beyond December 2006.

Radioactive discharges

The HIFAR quarterly report indicated that the airborne and liquid discharges from HIFAR were significantly below permitted limits.

Modifications under the Regulation 51

ANSTO reported that, during the quarter, nine new projects were initiated, ten modifications were in progress and one had reached practical completion.

One of the approved modifications is the purchase of new fuel elements from CERCA, an experienced French manufacturer of silicide fuel for research reactors. The purchase will allow operation of HIFAR until the end of 2006. In accordance with Regulation 51, the CEO approved the following modifications having significant implications for safety:

- the repair of a dent in an unfuelled part of a new fuel element, which had been found during an acceptance inspection of the element following its arrival from UK manufacturer in 2002;
- loading of the successfully repaired fuel element into the HIFAR reactor core;
- the replacement of the Vehicle Air Lock Hydraulic Power System;
- replacement of the Battery Bank in the Uninterruptible Power Supply;
- replacement of micro-switches on the HIFAR Coarse Control Arms; and
- the purchase of new HIFAR fuel elements.

Abnormal Occurrences

During quarter, two abnormal occurrences were reported by HIFAR Operations. ANSTO appropriately analysed both occurrences and provided ARPANSA with detailed information in their quarterly compliance report. ARPANSA assigned both occurrences level 0 on the International Nuclear Event Scale, that is, events having no safety significance.

ANSTO - OPAL Research Reactor – Construction Licence (F0118)

ARPANSA continued to monitor the construction of the OPAL reactor. Officers met regularly with their counterparts to assess the thoroughness of the ANSTO design review process, construction and pre-commissioning activities.

ARPANSA received three requests for construction of safety items under Regulation 54 and Licence Condition 4.6 during the reporting period. During the quarter, four requests were approved; two of which were submitted during the previous quarter. One of the approvals was for the manufacture of Fuel Assemblies by CERCA. The great majority of items important for safety have now been approved for construction by the CEO.

ARPANSA officers carried out twenty two inspections during the quarter to monitor compliance with the construction licence for the OPAL reactor.

ARPANSA received ANSTO's tenth quarterly report on compliance with Conditions of Facility Licence F0118 for the Construction of the Replacement Research Reactor. In addition, the Design Changes Status Report was updated to demonstrate compliance with design changes that fall under Regulations 51 and 52.

ANSTO - OPAL Research Reactor - Application for an Operating Licence (F0157)

ARPANSA is close to completing its review of ANSTO's application for an operating licence, including the 20 chapter Safety Analysis Report, plans and arrangements for managing safety and the substantial supporting documentation. ARPANSA officers have submitted questions to ANSTO seeking clarifications and additional information in relation to the application.

ANSTO - Waste Operations and Technology Development (Facility Licence F0044-4B)

Abnormal occurrences

ANSTO reported that there were no abnormal occurrences during the reporting period.

Modifications

As part of the ANSTO project to immobilise radioactive wastes arising from Molybdenum-99 production at Lucas Heights, ANSTO constructed and commissioned a mock-up plant to test mechanical operations using inactive materials. ARPANSA will continue to follow this matter.

Airborne Discharge

The airborne discharges from the stacks of WOTD facilities remained below the quarterly notification level.

Liquid Discharge

The effluent discharges from ANSTO Liquid Waste Treatment Plant were well within the Trade Waste Discharge Limit. These are also covered separately below, under the liquid discharges.

Inventories

The updated inventories of radioactive waste stored on the LHSTC site and all changes in stored inventories occurring have been obtained.

A source register containing three ultra violet (UV) sources has been provided, and two of these may be classified as controlled apparatus under the ARPANS Regulations. ARPANSA is assessing these apparatus for inclusion in the facility licence.

ANSTO - Fuel Operations (Facility Licence F0044-4C)

Criticality Safety Analysis

A criticality safety analysis was completed for the pending transfer of spent low enriched uranium fuel (LEU) from HIFAR to the storage pond. A criticality certificate was issued for MOATA fuel transfers, reassembly into its shipment configuration, testing its integrity and its storage in the pond. The LEU and MOATA fuel elements will be allocated separate storage rack facilities within the pond.

Modifications

The fuel element cropping saw, valving and hydraulics have been upgraded. ARPANSA observed the initial cropping operation following the saw being put back into service.

The Building 41 (B41) Hot Cell face electrical system (including electrical control panels) was completed.

Inventory Changes

There have been no changes during the quarter to the total quantity of fuel stored under the Fuel Operations licence.

Incidents

No incidents or non-conformances were reported.

Airborne discharges

Airborne discharges from Fuel Operations stacks were below the authorised notification limits.

Personnel doses

Personnel doses for the quarter continue to be well below the limits and local objectives.

Inspection

ARPANSA inspectors conducted an inspection at the fuel element cropping and storage pond and no non-compliances were observed.

ANSTO - Radiopharmaceuticals and Industrials (Facility Licence F0044-5A, 5B, 5C)

Licence conditions compliance

The ANSTO quarterly compliance report contains an appendix to show the updated status of compliance with the special licence conditions in Licence F0044-5A, 5B, 5C. This appendix is currently under ARPANSA review to assess the extent of compliance, in order to determine the special licence conditions that have been satisfied and can be removed by the CEO.

Relevant changes

ANSTO advised that the proposed redevelopment of radioisotope production in Building 23 (B23 Master Plan) has been cancelled and restoration of the site is planned to take place by the end of 2005.

The CEO previously approved upgrading of the ventilation system of the radioisotope production buildings. ANSTO stated that reports of validation testing of the ventilation system are nearing completion. The installation of an interface between the radiation monitoring system and the ventilation system to invoke a response from the ventilation system to a radiation sampler alarm condition is in progress.

Other changes

New windows have been installed in Cell 3 and 4 of Building 54 (B54).

New hot cells have been installed at B23A for Gentech production.

A report of the concept design and processing of new targets for Molybdenum-99 production is being prepared for submission to the ANSTO Safety Assessment Committee.

Incident/accident

An accident involving the possible overexposure of an ARI maintenance staff member occurred at the radioisotope production facility. The measured dose received by the staff member's radiation badge was 65.9 mSv. The annual dose limit is 20 mSv averaged over 5 consecutive years, with a maximum dose of 50 mSv in a year. ARPANSA inspectors investigated this matter and found evidences of three possible non-compliances related to Regulations 46, 47, 49 and 58 and Section 30(2) of the Act. ARPANSA's investigation found that ARI staff did not comply with the requirements of the relevant Safety Directives and was in default in returning the TLD badges in time. The investigation found that ARI did not have appropriate procedures to issue electronic dosimeters to staff and ANSTO Safety and Radiation Services did not have formal procedures to deal with overexposure. The ARI staff member who was overexposed was re-assigned to non-radiation duties. The CEO wrote to ANSTO seeking additional information before determining whether the incident did result in breaches of the Regulations and the Act.

An incident involving exposure to an operator occurred at the National Medical Cyclotron. The operator mistakenly removed a partially irradiated target shuttle from the reception cell. The incident occurred due to unclear communications, and corrective actions were taken to ensure clear communication. There was no significant safety consequence of this incident. A further incident involved minor radioactive contamination of clothing and hair at the Cyclotron. No internal contamination was detected by whole body counting. Corrective actions were taken following review of radiation control measures.

An incident occurred in which the in-cell crane rail was jammed and damaged during closing of the inter-cell door of the Molybdenum-99 production cell. Corrective actions were taken and the cell rail was repaired. There was no significant safety implication of this incident.

Airborne Discharge

The discharge notification level for Xenon-133 from molybdenum production exceeded the annual and 4-weekly notification levels during the previous quarter.

Such increase was attributed to the use of un-sieved magnesium oxide in packing irradiation target cans. Target cans packed using sieved magnesium oxide resulted in decreased release levels of Xe-133. As a result, discharges during this quarter were below notification levels.

Inspection

ARPANSA inspectors conducted inspections at two nuclear installations of ARI. Three non-compliances were identified from one inspection, as described above under “Incident/accident”.

ARPANSA inspectors conducted an inspection at B23 cropping pond and B23 Gamma pond. No non-compliances were observed in this inspection.

ANSTO – MOATA Research Reactor (Facility Licence F0044-6A)

Incidents

The quarterly report advises that there were no abnormal occurrences in relation to the care and maintenance of the MOATA reactor.

Modifications

No modifications to plant and procedures have been made in maintaining the facility.

Spent fuel movement

Procedures for the removal of the fuel from MOATA No 1 Storage Block have been revised and a submission in this regard is currently under the review of ANSTO Safety Assessment Committee. The transfer of the fuel in preparation for shipment is planned to be completed in early 2006. ARPANSA will monitor this transfer.

ANSTO - Airborne Radioactive Discharges

ARPANSA received a report from ANSTO on 8 August 2005 about all airborne discharges from the Lucas Heights Science and Technology Centre for the April – June 2005 quarter. This report indicated that the Xe-133 levels from molybdenum production exceeded the 4 weekly notification level between 26 April 2005 and 24 May 2005 and the annual notification level. The root cause of this was identified as being due to uranium dioxide target cans which had been machine packed using un-sieved magnesium oxide powder. ARPANSA is satisfied that ANSTO has undertaken the necessary steps to identify the cause of, and to reduce, these discharges. ARPANSA will continue to monitor the situation.

The maximum hypothetical off-site effective radiation dose at 1.6 km from all airborne discharges during the quarter was 1.48 μSv compared to the ALARA dose objective of 20 μSv per year and constraint of 100 μSv per year.

ANSTO - Liquid Radioactive Discharges

ARPANSA received reports from ANSTO on 1 August, 1 September and 5 October about liquid radioactive discharges from the Lucas Heights Science and Technology Centre during the period 27 May 2005 – 29 August 2005. The reported liquid effluent discharges comply with the Trade Waste Agreement between Sydney Water and ANSTO, with measured values typically being a few per cent of the relevant limit based on World Health Organisation drinking water standards.

Prescribed Radiation Facilities

Department of Education, Science and Training - Maralinga (F0043)

Licence holder quarterly compliance report was received in October 2005. A review of the quarterly compliance report was undertaken. The 2005/2006 licence charges were calculated and invoiced to the licence holder in July 2005. A reminder for payment of licence charges was sent to the licence holder in September 2005. ARPANSA did not receive the 2005/2006 annual licence charges from the licence holder during the quarter.

ANSTO - Gamma Technology Research Irradiator (Facility Licence F0044-6C)

On 9 September 2005 ANSTO informed the CEO of ARPANSA about the transfer of old Co-60 sources from the GATRI irradiator licence (F0044-6C) to the ANSTO Fuel Storage and Handling licence F0044-4C. In addition, following this transfer the GATRI facility was loaded up with 12 new Co-60 sources purchased from MDS Nordion Canada, and an updated inventory of the new sources was provided by ANSTO.

ANSTO Particle Accelerators (Facility Licence F0044-6Ba, 6Bb, Facility Licence F0134)

Incidents

No incidents were reported in this quarter.

Modifications

ARPANSA received a proposal for modification to the Ion Source, High Voltage Platform on the ANTARES Accelerator. This proposal is currently under ARPANSA review.

The connection of the oxygen depletion alarm in B22 (STAR accelerator) to a computerised alarm panel in the Site Control Centre is progressing.

Safety management

The Safety Analysis Report (SAR) for the STAR accelerator has been submitted to ARPANSA. This report is currently under ARPANSA review.

The SAR for the ANTARES Accelerator is currently under ANSTO review and a copy of the revised SAR would be provided to ARPANSA once finalised.

Commissioning Report

The commissioning report for the STAR accelerator is being provided to ARPANSA.

Emergency Arrangements

It is mentioned that the review and exercise of local emergency arrangements are planned to be completed by the end of 2005.

Actions arising from an inspection

ANSTO provided ARPANSA the results of radiation surveys of the accelerators, which are currently under ARPANSA review.

ARPANSA Facilities (Facility Licence F0046)

Other Changes

A new staff member is being inducted.

Such change is unlikely of to have significant implications for safety and reporting of these changes satisfies Regulation 52.

Quality system

Both facilities (teletherapy and linac) are covered by a quality system consistent with ISO/IEC 17025. The target date for bringing the two facilities under ARPANSA Quality System is December 2005.

Training, accreditation and authorisation

The quarterly report mentions that criteria have been established and documentation is being updated with the quality system. The scheduled date for completion has been changed from March 2005 to March 2006.

Safety tests, inspections and reviews

The existing procedures and documentation is being updated with the quality system and the target date of completion has been changed further from June 2005 to March 2006.

Emergency arrangements

It is mentioned that the development of suitable exercises for biennial review is in progress.

Operating limits and conditions

Further clarification on operating limits and conditions is progressing.

Radiofrequency exposure levels

It is mentioned that the measurements of radio-frequency leakage have been undertaken, but no significant levels have been detected. The next date of review of radiofrequency exposure is scheduled in February 2006.

CSIRO HIAF (Facility Licence F0060)

No quarterly report, as required by standard licence condition 4.1.1, was received. However the facility is known to be non-operational. A request for approval to dispose of this controlled facility to an overseas buyer was approved last quarter. Confirmation of transfer is awaited.

ANU – Accelerators (F0074)

The annual facility licence charge was calculated and a reminder for the quarterly compliance report sent to the licence holder nominee.

Customs – Container Examination Facilities (F0125, F0131, F0136, F0155 and F0156)

Inspections of the Container Examination Facilities at Osborne, Melbourne, Brisbane and Fremantle were undertaken during the quarter. Inspectors found Customs were able to demonstrate positive compliance with Conditions of Licence and the ARPANS Regulations. During the inspection process Customs undertook to review and update the Radiation Safety Management Plan for the operation of the facilities and provide a copy to ARPANSA by the 28 October 2005.

Australian Customs Service – Neutron Scanner – Queensland (Licence application)

Regulatory officers conducted a site visit to the Neutron Scanner facility at Brisbane Airport. No non-compliances were found during this inspection. Information was gathered to assist regulatory officers in assessing the application to operate the neutron scanner, facility licence application F0162, which is currently under review by regulatory officers.

Controlled Materials and Controlled Apparatus

ARPANSA Environmental and Radiation Health Branch (Source Licence number S0002)

The 2005/2006 annual licence charges were calculated and invoiced to Environmental and Radiation Health Branch, who have subsequently paid. A quarterly report was received from the licence holder and a regulatory review of the report carried out.

ARPANSA Medical Radiation Branch (S0003)

An inspection of the Controlled Material and Controlled Apparatus at Yallambie laboratories was conducted on the 18 August 2005. An inspection report is currently being prepared.

CSIRO

Notification was received of reorganisation of a number of CSIRO divisions with consequences for the administration of the organisation's source licences. Until all licences can be revised and re-issued, the existing authorisations are deemed to remain in force.

As a consequence of the UV overexposure accident reported last quarter, CSIRO was found to be in breach of the conditions of one of their source licences. As in previous cases of overexposure, it appears that lack of operator safety awareness training may have been a factor. In addition, as in one of the previous cases, the apparatus did not appear on the inventory of controlled sources and no hazard assessment had been undertaken. Additional remedial actions to those proposed by the CEO of CSIRO were requested. These include the undertaking of a further review of all non-ionising radiation sources to ensure that all controlled apparatus are identified and recorded.

CSIRO Land and Water (S0009)

Last quarter a possible breach of regulation 51 was reported relating to use of unauthorised controlled apparatus. The quarterly report from Land and Water for

April – June notes that the unit is operated by CSIRO Marine and Atmospheric Research staff and that Land and Water is negotiating with Marine and Atmospheric Research to have the item listed on their inventory.

Department of Prime Minister and Cabinet (S0012)

The Department of Prime Minister and Cabinet provided ARPANSA with updated procedures for their mail inspection units.

Geoscience Australia (S0014)

Regulatory officers received a licence application from GA to deal with a hand held partially enclosed x-ray apparatus. This application is currently under review.

CSIRO – Molecular and Health Technologies (S0016)

CSIRO Molecular Science and parts of Health Sciences and Nutrition were amalgamated on 1 July 2005 into the new division of Molecular and Health Technologies. This re-organisation has not affected the use of controlled sources. Until a revised source licence is issued, the authorisations of the current Source Licences S0016 and S0038 remain in force.

CSIRO - Sustainable Ecosystems (S0018)

Approval was granted for the disposal of two items of controlled apparatus. This follows the closure of radiation laboratories at Gunghalin.

CSIRO - Marine and Atmospheric Research (S0019)

CSIRO Marine Research and CSIRO Atmospheric Research amalgamated on 1 July 2005 into the new division of Marine and Atmospheric Research. This re-organisation has not affected the use of controlled sources. Until a revised source licence is issued, the authorisations of the current Source Licences S0019 and S0059 remain in force.

A request was approved under regulation 53 (1) to permit CSIRO to dispose of controlled material from Marine and Atmospheric Research by transfer overseas.

Department of Transport and Regional Services (S0020)

An inspection was conducted in mid July with no findings of non-compliance. Regulatory officers made a number of suggestions for improvement. The Department of Transport and Regional Services has provided a written undertaking to carry out these improvements.

CSIRO Plant Industry (S0021)

A replacement Source Licence was issued with revised conditions relating to training requirements for the use of specified radiation sources.

The licence holder was notified of a finding of breach of licence conditions in relation to the overexposure of a maintenance worker to UV radiation. A series of remedial actions are being undertaken on an organisation-wide basis. A report from the licence holder is due by the end of September and additional information is anticipated in the routine quarterly reports for July to September that are due by October 28.

CSIRO Food Science Australia (S0023)

Notification was received that, as a part of the reorganisation of CSIRO divisions during the next 12 months, a part of Health Sciences and Nutrition division is to join with Food Science Australia. This re-organisation is not expected to affect the use of controlled sources. Until a revised source licence is issued, the authorisations of the current Source Licences S0023 and S0038 remain in force.

Approval was granted for the disposal of four controlled apparatus.

National Gallery of Australia (S0024)

An application to deal with ultraviolet apparatus is currently under review by ARPANSA regulatory officers. ARPANSA has asked the National Gallery to provide additional information upon the receipt of which the application review will be completed.

Australian National University (S0027)

Regulatory assessment of a request for approval to dispose of a source under regulation 53 has commenced.

Australian Crime Commission (Source Licence S0034)

The licence holder sought approval to dispose of a controlled apparatus. Approval has subsequently been given by the CEO of ARPANSA. In addition, a new controlled apparatus was added to the source inventory. The Sydney office of the ACC changed location and the new details were provided to ARPANSA.

Federal Court of Australia (S0036)

Regulatory officers have been in contact with the FCA regarding the ownership of baggage inspection x-ray units operated for the court. The FCA has yet to supply proof that the ownership of the x-ray units has been transferred to Law Courts Ltd.

The FCA is yet to satisfactorily respond to findings of minor non compliance which were determined during an inspection conducted on the 22 December 2004.

CSIRO – Health Sciences and Nutrition (S0038)

Notification was received of the reorganisation of Health Sciences and Nutrition, Molecular Science and Food Science Australia (see above). The new division of Human Nutrition has been formed from the Adelaide site of Health Sciences and Nutrition prior to eventual merger with Food Science Australia later this year. The authorisations of the current Source Licence S0038 remain in force.

Family Court of Australia (Source Licence S0040)

A meeting was conducted at Miranda, Sydney between licence holder representatives and Regulatory Branch officers to discuss radiation safety training. Regulatory Branch provided the licence holder with a review of one proposed training package and provided possible radiation safety training information. The licence holder is currently using these and other sources of information in developing a radiation safety training package.

Australian Defence Force (S0042)

A meeting of the Defence-ARPANSA Liaison Forum (DALF) was held at ARPANSA Miranda on 7 July 2005. An inspection of the Incident Response Regiment at Holsworthy, Sydney was conducted on 18 August 2005 as a result of a

potential overexposure. An inspection report has been completed which identified no major non-compliances. An ARPANSA officer gave a presentation to the Defence OH&S / Union Forum.

Geoscience Australia – Geospatial and Earth Monitoring Division (S0047)

A review of the quarterly compliance report was undertaken. The annual source licence charge was calculated and a reminder for the quarterly compliance report sent to the licence holder nominee. The licence holder has subsequently paid the 2005/2006 licence charges.

CSIRO – Forestry and Forest Products – (S0054)

From 1 July 2005, CSIRO Forestry and Forest Products embarked on a joint venture to be known as “Ensis”. The Source Licence remains in the name of CSIRO Forestry and Forest Products.

Approval was given for disposal of a radium-226 source to a non-Commonwealth organisation prior to its transfer overseas and for return of a controlled material to the manufacturer.

Approval was given for a relevant change with significant implications for safety (transfer of control of a laser product from Atmospheric Research to Forestry and Forest Products).

Australian Federal Police (S0056)

The licence holder is considering purchasing a new security device. In August 2005 licence holder representatives and Regulatory Branch officers conducted a meeting at Miranda, Sydney, to discuss the security device. Regulatory branch is currently reviewing the details of the device, the licence holder’s safety plan and supporting documents.

The CEO approved a request for disposal of various controlled apparatuses by the licence holder.

The licence holder notified Regulatory Branch in August 2005 of a potential incident involving over-exposure of TLD badges. The potential incident occurred in the period 27 April to 16 August 2005. In August 2005, the licence holder provided Regulatory Branch with a client dose result investigation report conducted by Queensland Radiation Monitoring Service (QRMS) of the potential incident. The QRMS report concluded that the potential over-exposure was highly likely spurious and was not a real over-exposure. Regulatory Branch sent a letter to the licence holder in September 2005 asking for further documentation regarding the potential incident, which was subsequently provided. A review of the incident is currently being undertaken by the Regulatory Branch.

Two inspections of the licence holder were conducted in September 2005 in Western Australia. The inspection reports are currently being processed.

CSIRO Atmospheric Research (S0059)

CSIRO Atmospheric Research and CSIRO Marine Research amalgamated on 1 July 2005 into the new division of Marine and Atmospheric Research. This re-organisation has not affected the use of controlled sources. Until a revised source licence is issued, the authorisations of the current Source Licences S0019 and S0059 remain in force.

CSIRO Exploration and Mining (S0061)

The quarterly report for April – June was received four weeks after the due date. The updated source inventory includes two items of a kind of controlled apparatus not authorised by Source Licence S0061. A request for approval under regulation 51 is yet to be provided.

On 4 July 2005 notification was received of two routine dosimeters with excessive doses. An incident report received on 31 August 2005 outlined the circumstances and included a plausible explanation for excessive dose to the dosimeters but not to the individual to whom they were issued. An inspection to ascertain further information has been arranged.

CSIRO - Manufacturing and Infrastructure Technology (S0066)

Notification was received of an accident involving laser exposure to the eye of a research scientist performing alignment operations with a class 4 laser. Medical consequences appear to be minimal and the assessment and follow-up by CSIRO indicate no breach of licence conditions or good laboratory practice. Some detail improvements to procedures have been implemented and an inspection has been arranged.

National Museum of Australia (S0077)

A UV policy is being developed to determine which UV sources are classified as controlled apparatus. The UV sources owned by the National Museum of Australia are being evaluated.

Department of Foreign Affairs and Trade (S0079)

The use of UV sources by DFAT is currently being examined by ARPANSA to determine whether these fall under the definition of controlled apparatus. ARPANSA has requested more information needed to make a decision.

Australian War Memorial (S0080)

An inspection was conducted in mid July with no findings of non-compliance. Regulatory officers made a number of suggestions for improvement that the AWM gave a verbal undertaking to carry out.

At the request of the AWM, Regulatory officers have also been involved in providing feedback on the AWM's updated Radioactive Materials Policy.

Australian Customs (S0092)

Regulatory officers reviewed the 24/06/05 Licence Holder Compliance Report. Regulatory guidance was provided in relation to Class 1 lasers.

CSIRO – Industrial Physics (S0105)

In compliance with regulation 45, the licence holder identified an apparent breach of regulation 53 in relation to notification of the transfer of controlled apparatus to the National Measurement Institute in July 2004. The transfer was identified with the updated source inventory in October 2004 and final confirmation of all items transferred was reported in July 2005. Assessment of the breach is that it is technical in nature with limited safety significance and no action is required. The licence holder was notified accordingly.

Australian Quarantine Inspection Service (S0120)

A review was conducted to ensure the licence holder responded to the findings of the inspection conducted at the licence holder's Sydney location in December 2004. The inspection report, dated 31 January 2005, indicates two non-compliances, specifically display of source licence and radiation safety training. The licence has subsequently been put on display; however radiation safety training requirements are still unresolved with the licence holder currently undertaking measures to ensure appropriate training is provided to staff before the end of June 2006.

An application to deal with ultraviolet apparatus is currently under review by ARPANSA regulatory officers. ARPANSA has asked AQIS to provide additional information upon the receipt of which the application review will be completed.

Telstra (S0127)

On 8 July 2005, Telstra was informed by the CEO of ARPANSA that its Passive Optical Networks did not fall under the definition of controlled apparatus for the purposes of the ARPANS regulations.

Australian Securities and Investment Commission (Source Licence S0129)

A review was conducted to ensure the licence holder responded to the findings of the inspection conducted at the licence holder's Sydney location in December 2004. The inspection report, dated 31 January 2005, indicates two non-compliances, specifically display of source licence and radiation safety training. The licence has subsequently been put on display; however radiation safety training requirements are still unresolved with the licence holder currently undertaking measures to ensure appropriate training is provided to staff before the end of June 2006.

Department of Immigration and Multicultural and Indigenous Affairs (S0135)

Regulatory officers advised DIMIA that they had not updated plans and arrangements in the last year. As a result of this advice, DIMIA forwarded a copy of updated plans and arrangements to ARPANSA.

National Measurement Institute (S0142)

An inspection was conducted of the licence holder in July 2005. The inspection indicated a non-compliance with laser labelling. Other recommendations were suggested as part of the inspection process. The licence holder has resolved the issues arising from the inspection and no further action is required.

An application to extend the source licence S0142 to include additional dealings with controlled apparatus was received by Regulatory Branch in June 2005. A review of the licence application was conducted with the CEO approving the extension to source licence S0142. This resulted in the National Measurement Institute being issued with a new source licence S0142. The original source licence has subsequently been returned to Regulatory Branch.

Australian Postal Corporation (S0150)

An inspection of the Australian Postal Corporation (APC) International Mail Centre, Perth, Western Australia, was conducted in September 2005. An inspection report is currently being prepared.

A regulatory review of the APC quarterly compliance report was undertaken. The APC updated their Safe Operating Procedure for the use of baggage x-ray units in

May 2005. The 2005/2006 annual licence charges were calculated and invoiced to APC, who have subsequently paid.

Attorney General's Department (S0151)

A review was conducted to ensure the licence holder responded to the findings of the inspection report dated 28 October 2004. The licence holder responded to the inspection report with a letter dated 15 November 2004. The licence holder has addressed three of the four inspection report findings. The only outstanding issue is a review by the licence holder of plans and arrangements, which will be forwarded to ARPANSA at their completion.

Australian Communications and Media Authority (Not currently licensed)

An inspection of the Australian Communications and Media Authority (ACMA) South Morang, Victoria, monitoring station was conducted in August 2005. The inspection was to determine if a radium clock required ARPANSA regulatory action. The CEO of ARPANSA sent ACMA a letter which described the findings of the inspection report and identified some non-compliance with the ARPANS Act 1998. The ACMA are currently preparing a source licence application which will be submitted to Regulatory Branch when complete. The ACMA are also making arrangements to survey the clock.

Inspections for compliance monitoring

ARPANSA continues an active program of inspections to determine compliance with licences issued under the *ARPANS Act 1998*. The following inspections were undertaken in the quarter:

- ARPANSA Medical Radiation Branch (S0003)
- Department of Transport and Regional Services (S0020)
- Department of Defence (Incident Response Regiment) (S0042)
- ANSTO Fuel Operations (F0044-4C)
- ANSTO Radiopharmaceuticals and Industrials (F0044-5A, 5B, 5C)
- Australian Federal Police (West Perth Office) (S0056)
- Australian Federal Police (Perth Domestic Airport) (S0056)
- Australian War Memorial (S0080)
- ANSTO OPAL research reactor construction (F0118)
- Australian Customs Service Melbourne Container Examination Facility (F0131)
- Australian Customs Service Fisherman Islands Container Examination Facility (F0136)
- National Measurement Institute - Sydney (S0142)
- Australian Postal Corporation (S0150)
- Australian Customs Service Fremantle Container Examination Facility (F0155)
- Australian Customs Service Adelaide Container Examination Facility (F0156)
- Australian Customs Service Brisbane Neutron Scanner Facility (F0159)

- Australian Communications and Media Authority (Not currently licensed)

Licence holder reports

A summary of licence holder compliance reports and a full list of facilities licensed under the ARPANS Act and are set out in Annex A.

Report on the operations of the Radiation Health and Safety Advisory Council, the Radiation Health Committee and the Nuclear Safety Committee

Radiation Health and Safety Advisory Council

The Council met on 5 August 2005. A summary of the meeting is available at http://www.arpansa.gov.au/rhsac_mt.htm.

Advice to CEO on NORM

The Council discussion paper on NORM had been updated to reflect submissions that had commented on errors in the data or had provided additional data. Dr Cooper would similarly update his report in relation to data. Council discussed the draft advice to the CEO. Council noted that guidance on NORM would need to be developed in a transparent manner to gain the confidence of the stakeholders. Council's advice is that it was better to manage the issue than to ignore it, and that the difficulty in controlling the risks and the magnitude of the risks in comparison with other risks should be acknowledged.

Adoption of Code of Practice on Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing

Council noted that the draft Code and Safety Guide had been approved by the RHC, and the final Regulation Impact Statement had been cleared by the Office of Regulation Review. Council recommended that the CEO adopt and publish the Code and Safety Guide.

Emerging Medical Radiation Issues

The CEO advised that he was seeking a brief high level overview of how changing technology and changing medical practice interacted in terms of the balance between the risks and benefits of radiation in medicine.

Security of Radioactive Sources

The CEO informed Council of progress on a range of actions taken in response to the Code of Conduct on the Safety and Security of Sources:

- an Australian Code of Practice on security of sources is under development;
- a working group had been formed to consider the question of how to look for and deal with orphan sources in Australia;
- a simple national register will be established to track high hazard sources and will be developed further over time; and
- export controls are needed and amendments to customs laws for this purpose are expected to be in place before the end of 2005.

Council Triennium and Annual Report

Council agreed to a triennium report.

Radiation Health Committee

The Committee met on 20 and 21 July 2005. A summary of the meeting is available at http://www.arpansa.gov.au/rhc_mt.htm.

Standard for limiting exposure to extremely low frequency electric and magnetic fields (0Hz – 3kHz)

The Committee agreed that release of a draft for public comment be delayed due to the need for further consideration of some significant comments raised by the Consultative Group and regulators and other new information.

Radioactive waste management strategy

The Committee was briefed by an officer from DEST on the Government's announcement of sites to be assessed for the Commonwealth Radioactive Waste Management Facility. The Committee discussed details of the proposed national audit of radioactive waste.

Use of lasers on humans

The Committee was advised by the working group convenor, Dr Stephen Newbery, of progress with development of the competencies required to use Class 4 lasers and proposals for their regulation. The Committee asked the working group to complete its development of the lists of competencies persons using Class 4 lasers will need to have to ensure the different laser practices are performed safely, for consideration at the July 2005 RHC meeting. With regard to Class 3 lasers, the Committee asked the working group to provide, for discussion at the next meeting of the Committee, information on who is using Class 3 lasers, how many there are, recommendations on how the hazards associated with their use on humans should be controlled and options for regulation of the use of these lasers.

Optimisation of exposure for members of the public

The Committee agreed to form a working group to prepare guidance on this issue.

Code of Practice for the safe use of radiation in veterinary science

The Committee agreed that the draft Code presented at the meeting was suitable for public comment subject to the preparation of a RIS.

Code of Practice on the Security of Radioactive Sources

The Committee was provided with a presentation on the risk assessment that underpins the draft Code of Practice and discussed the approach taken in developing the Code. The Committee was advised that the onus will be on the Responsible Person to act in accordance with the requirements of the Code.

Standard for occupational exposure to ultraviolet radiation

The Committee considered a revised draft of the Standard and agreed that it be released for a second round of public comment.

Nuclear Safety Committee

The NSC met on 22 July 2005. A summary of the meeting is available at http://www.arpansa.gov.au/nsc_mt.htm.

The meeting provided each Working Group (WG) with an opportunity to report on the following matters with regard to their work on advice to the CEO regarding ANSTO's application for a licence to operate the OPAL research reactor.

Report from Waste Management Working Group

The draft report from the Radioactive Waste Management WG was considered to be well advanced. Members noted several issues requiring resolution before the final report could be prepared.

Report from Conduct of Operations Working Group

The draft report from the Conduct of Operations WG was also at an advanced stage but some issues still required clarification. The report would be redrafted based on the discussion at the meeting and forwarded to members for comment.

NSC Report to CEO

The CEO advised that the public submission process was not due to finish until the end of August and that a public forum was planned for December 2005. As there was value in the final report of the Committee being available well before the public forum, he requested the final version by the end of September 2005.

Reports required by subsections 60 (2)-(5) of the Act

Details of directions given by the Minister under Section 16

No directions were given by the Minister under Section 16 of the Act during the quarter.

Details of any breach of licence conditions by a licensee during the quarter, of which the CEO is aware

Breaches determined by the CEO

Source Licence S0021 – CSIRO Plant Industry breach of special licence condition 1, standard licence conditions 1(d) and 2, regulations 44, 46 and 49 and section 31(2) of the Act.

Potential Breaches with significant safety implications, under review

ANSTO Facility Licence, F0044-5A, 5B, 5C: ANSTO Radiopharmaceuticals and Industrials. Possible breaches of regulations 46, 47, 49, 58 and Section 30(2) of the Act.

On 15 September 2005, ANSTO notified ARPANSA that a personal radiation monitor indicated that an ANSTO Radiopharmaceuticals and Industrials (ARI) radiation worker had received a dose of 65.9 mSv. The overexposure appears to have occurred in June 2005. The worker has been reassigned to duties not involving exposure to radioactive substances.

Regulations to the *Australian Radiation Protection and Nuclear Safety Act 1998* prescribe statutory conditions of licence which include a requirement that occupational exposure must not exceed 20 mSv annually, averaged over 5 consecutive calendar years, and, that in any given year, occupational exposure must not be greater than 50 mSv (Regulation 58). It is also a statutory condition of licence that a licence holder must report accidents to the CEO of ARPANSA within 24 hours of the accident happening (Regulation 46(2)(c)).

Following an investigation by ARPANSA Inspectors, the CEO of ARPANSA found apparent breaches of Regulations 46(2)(c) and 58 and invited ANSTO to make a submission about the findings. The CEO also required ANSTO to provide further information about the cause of the overexposure to assist him to make findings regarding other potential breaches of statutory licence conditions.

Reports to the CEO from the Council and NSC (paragraphs 20(f) and 26(1)(d) of the Act)

The CEO received the following reports:

- a report from the Council entitled *Naturally-Occurring Radioactive Material (NORM) in Australia: Issues for Discussion*; and
- a report from the NSC on ANSTO's application for a licence to operate the OPAL research reactor.

The CEO did not receive any reports from the RHC during the quarter.

A list of all facilities licensed under Part 5 of the ARPANS Act

Two new facility licences were issued during the quarter, as follows:

Australian Customs Service	
F0156	Brisbane Airport Neutron Scanner Facility (Construction)
F0131	Osborne Pallet X-Ray Facility (Operation)

A full list of facilities licensed under the ARPANS Act and a summary of licence holder compliance reports are set out in Annex A.

Annex A – **Compliance Reporting by Licence Holders for the Period
01 April to 30 June 2005**

Licence ¹	Licence Holder	Date of receipt of quarterly report	Comment ²
Australian Nuclear Science and Technology Organisation			
F0118	OPAL Replacement Research Reactor (Construction)	21/07/05	Four requests for construction of items important to safety were approved.
F0044-4A	HIFAR Research Reactor	19/07/05	Two minor incidents (INES level 0) and a number of plant modifications.
F0044-4B	Waste Operations & Technology Development	25/07/05	No change.
F0044-4C	Fuel Storage & Handling	25/07/05	Inspection conducted at B23 cropping pond and gamma pond.
F0044-5A, 5B	Australian Radiopharmaceuticals and Industrials	26/07/05	An incident involving inter-cell door jamming and damage to the in-cell rail occurred at B54. An incident involving unintended exposure of an operator occurred at the National Medical Cyclotron. A second incident involving minor contamination of clothing and hair also occurred at the Cyclotron. An incident involving the overexposure of an operator occurred at a radioisotope production facility. Two inspections were conducted. Evidence of three possible non-compliances were found.
F0044-5Cc	Gamma Irradiator Suite	26/07/05	No change.
F0044-6A	Moata Research Reactor (Decommissioning)	25/07/05	No change.
F0044-6Ba	ANTARES Accelerator	25/07/05	No change.
F0044-6Bb	Van de Graff Accelerator	25/07/05	No change.
F0044-6C	GATRI Irradiator	27/07/05	Revision of quality documents into Safety & Radiation Safety Services QMS continued.
F0044-6D	Secondary Standards Dosimetry Laboratory	21/07/05	No change.
F0044-7A	Ore Processing Facility	15/07/05	Confirmation of new nominee following transfer of administrative responsibility to ANSTO Minerals. Minor changes to source inventory.
F0044-7B	Radiotracer Storage Facility	25/07/05	No change.

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F0044-8A	Actinide Suite	28/07/05	Safety Analysis Report revised.
F0044-8B	Materials Fabrication Bay	25/07/05	Procurement of two replacement hand and foot monitors. Development of new database. Irreparable XRD unit withdrawn from service to be used for spare parts. Good working practices procedure updated. A copy of a report on the assessment of consequences of a building fire in the MFB was provided. This report indicated negligible radiological consequences.
F0134	STAR Accelerator	25/07/05	No change.
S0045	ANSTO Inst Nuclear Geophisiology (formerly Environment Division)	25/07/05	Changes to source inventory consistent with prior transfer notifications. Four 'legacy sources' discovered and transferred to Waste Management.
	ANSTO Materials and Engineering Science	25/07/05	Minor changes to source inventory. Safety assessments and work instructions updated. Calibration of microwave survey meter reported.
	ANSTO Minerals	17/08/05	Confirmation of new Nominee and new Licensing Officer following separation from ANSTO Environment in June 2005. Documentation currently being revised to reflect administrative changes.
	ANSTO Safety & Radiation Science	25/07/05	Minor changes to source inventory.
	Bragg Institute	29/07/05	Three additions to the source inventory.
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)			
F0046	Linear Accelerator and Teletherapy Laboratory	29/07/05	No change.
S0002	Environmental & Radiation Health Branch	27/07/05	Radiation Safety Management system integrated into the ARPANSA Quality System. Minor source inventory change. Redesignation of a number of sources as waste. Plans and Arrangements updated 30 June 2005. Radiation Safety Management System resulted from review of existing plans and arrangements.
S0003	Medical Radiation Branch	27/07/05	Radiation Safety Management system integrated into the ARPANSA Quality System. Minor source inventory change. Plans and Arrangements updated 30 June 2005
S0051	Non-ionizing Radiation Branch	27/07/05	Plans and arrangements reviewed and updated 30 June 2005. A Radiation Safety Management System resulted from this review.
Australian National University			
F0074	Accelerators	12/07/2005	Compliance with special licence condition was progressed.
S0027	Faculty of Engineering & Information Technology	14/07/05	No change.

	Human Resources	14/07/05	Calibration sources moved.
	John Curtin School of Medical Research	14/07/05	No change.
	Research School of Astronomy & Astrophysics	14/07/05	No change.
	Research School of Biological Sciences	14/07/05	No change.
	Research School of Earth Sciences	14/07/05	Decommissioned x-ray unit and decommissioned RF heater have been moved.
	Research School of Pacific & Asian Studies	14/07/05	No change.
	Research School of Physical Sciences & Engineering	14/07/05	No change.
	Faculty of Science	14/07/05	12 May 2005 – needle stick injury with contaminated syringe previously containing H-3 thymidine. ANU Investigation Report and actions issued – actions to be completed by 22 July 2005. A radiation incident report was submitted. New Class 4 laser and UV source added to source inventory. Scintillation counter decommissioned.
	Research School of Chemistry	14/07/05	11 May 2005 - UV exposure to eyes/face whilst repairing hand-held UV lamp resulting in minor eye irritation. ANU Investigation report and actions issued – actions completed. A radiation incident report was submitted. Laser Class 3B (restricted) added.
	School of Art	14/07/05	No change.

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

F0060	Heavy Ion Accelerator Facility	Not received	Facility inoperable. CEO granted approval for disposal.
F0137	Neutron Generator Facility	05/07/05	No change.
S0009	Land and Water	25/07/05	Changes to source inventory. Chief of Division responded to inspection findings.
S0010	Textile and Fibre Technology	23/06/05	Minor amendment to source inventory.
S0013	Corporate Property	01/07/05	Change of Nominee. Emergency response plan reviewed and unchanged.

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S0016	Molecular Science	26/07/05	CSIRO Molecular Science and parts of Health Sciences and Nutrition were amalgamated from 1 July 2005 into Molecular and Health Technologies with consequent revision of the source inventory for the new division. Report on annual review of plans and arrangements will be provided in September. Notification of new Nominee.
S0017	Entomology	26/07/05	UV overexposure recorded (as previously notified by Plant Industry). Transfer of NIR controlled apparatus from CSIRO Sustainable Ecosystems, Gunghalin site to Entomology, Black Mountain. Gamma irradiator source has exceeded its recommended working life. Details provided of major service in September 2004.
S0018	Sustainable Ecosystems	08/07/05	Closure and decommissioning of radiation laboratories at Gunghalin. Monitoring to confirm no evidence of residual contamination. Controlled apparatus transferred to Entomology division.
S0019	Marine Research	15/07/05	No change
S0021	Plant Industry	15/08/05	Urrbrae: Site radiation safety booklet update expected Sept 2005. Response to May inspection results accepted. Other sites: No change
S0022	Livestock Industries	28/07/05	AAHL Geelong - Changes to source inventory. Armidale - Review of disposal arrangements and change of contractor. Replacement RSO. Floreat Park, St Lucia and Rockhampton – no change.
S0023	Food Science Australia	12/08/05	3 new controlled apparatus. Four requests for approval to dispose of controlled apparatus. Two apparatus to be removed from the inventory as not meeting the definition of controlled apparatus.
S0025	Energy Technology	28/07/05	Notification of records review and update of inventory information.
S0030	Petroleum Resources	20/07/05	Comprehensive reviews of plans and arrangements for North Ryde and Kensington sites, in compliance with regulation 50. Two new users trained and authorised to operate CT apparatus.
S0038	Health Sciences and Nutrition	1/08/05	Parkville site: merged with CSIRO Molecular Sciences to form Molecular and Health Technologies - Source Licence S0016 Adelaide site: renamed Human Nutrition pending a merger with Food Science Australia. Source Licence remains S0038 Notification of corresponding amendments to the source inventory. Annual review of plans and arrangements associated with reorganisation was completed on 30/06/05.
S0054	Forestry and Forest Products	27/07/05	Request for approval to dispose of a controlled material. Request for approval for a relevant change with significant implications for safety.

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S0059	Atmospheric Research	14/07/05	Transfer of controlled apparatus to Forestry and Forest Products division. Wipe testing of sources in storage at Aspendale confirmed no contamination. CSIRO Atmospheric Research and CSIRO Marine Research amalgamated on 1 July 2005.
S0061	Exploration & Mining	01/09/05	Minor changes to source inventory.
S0064	Minerals	05/07/05	One addition to inventory. Review of source inventory to identify sealed sources beyond recommended working life. Wipe testing of sealed sources at Clayton. Review of safety assessment of neutron and gamma experiments with bulk materials.
S0066	Manufacturing and Infrastructure Technology	08/08/05	Notification was received of a change of licence nominee. Significant changes to source inventories at: Clayton – 1 new UV Apparatus, other details added. Preston – 3 new lasers, details to be provided. Highett – Additional UV sources, 16 newly discovered and 3 transferred from SSL. Additional sealed sources, 1 newly discovered (3 more to be added when details are available) and 4 transferred from SSL. 1 newly discovered RF source. Woodville – 1 additional UV source Annual review of plans and arrangements for ionising radiation sources undertaken at Clayton. Non-ionising radiation arrangements are under review.
S0105	Industrial Physics	25/07/05	Apparent breach of regulation 53. 29 controlled sources transferred to National Measurement Institute. Annual review of plans and arrangements, no changes recommended.
S0130	Australia Telescope National Facility	12/07/05	No change
Department of Defence			
F0084	Woomera Storage Facility	05/08/05	A work request raised for the external warning signs to be repaired or replaced
F0113	Bandiana Storage Facility	05/08/05	Radon concentration monitoring completed 13 April 2005.
F0116	RADIAC Calibration Facility	05/08/05	Tender released for an upgrade to the RADIAC Clean Room.
F0117	Salisbury Storage Facility	05/08/05	Repair underway to prevent ingress of water and birds into the Facility

S0042	Aust Defence organisation	05/08/05	<p>An incident involving the possible exposure of personnel to controlled material was reported to ARPANSA on 20 April 2005.</p> <p>A Prescribed Radiation Facility previously listed on the Defence Source Inventory as a controlled apparatus was identified.</p> <p>Additions and corrections to the source inventory were reported.</p> <p>The transfer of 6 Rolls Royce viper engines were reported.</p>
Australian Customs Service			
F0125	Matraville Container Examination Facility	26/07/05	No change.
F0131	Melbourne Container Examination Facility	26/07/05	Driver interlock system upgrade with no significant implications for safety.
F0136	Fisherman Island Container Examination Facility	26/07/05	Driver interlock system upgrade with no significant implications for safety.
F0155	Fremantle Container Examination Facility	26/07/05	Following deviation from the driver interlock protocol by drivers on two separate occasions procedures are being reviewed as part of a national Standard Operating Procedure review. Driver interlock system upgrade with no significant implications for safety.
F0156	Osborne Container Examination Facility	26/07/05	No change
F0159	Brisbane Airport Neutron Scanner	26/07/05	No change
S0092	Source Licence	24/6/05	SIW updated
Single Licence Holders			
F0043	Dept of Education Science and Training – Maralinga	No report received during the quarter	No report received during the quarter
F0093	Parks Australia North	27/07/05	Report of inspection by OSS on 18 May 2005. Recommendations completed.
S0005	Bureau of Meteorology - Cape Grim	05/07/05	One additional controlled source.
S0007	Aust Institute of Marine Science	12/08/05	Change of Radiation Safety Officer. Minor change to source inventory.
S0008	Australian Antarctic Polar Medicine	27/07/05	June 2005, annual review of plans and arrangements with positive feedback on radiographic imaging improvements.

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S0012	Dept of Prime Minister & Cabinet	22/07/05	Plans and Arrangements updated New RSOs to be trained.
S0014	Dept of Industry, Tourism & Resources (Geoscience Australia)	14/07/05	No change
S0015	Supervising Scientist	26/07/05	No change.
S0020	Dept of Transport & Regional Services	22/07/05	No change
S0024	National Gallery of Australia	26/07/05	Training in safe use of x-ray devices planned.
S0031	National Capital Authority	15/08/05	Report on actions arising from inspection. NCA is in the process of substituting their Class 3B laser with two data projectors.
S0033	Note Printing Australia	19/07/05	Changes to the source inventory. New documentation for internal compliance audit provided to ARPANSA.
S0034	Australian Crime Commission	05/07/05	Tender process completed for removal of one x-ray mail screening unit and purchase of a replacement screening unit. Radiation safety awareness training course conducted for operators and supervisors in May 2005. December 2004 inspection recommendations have been implemented.
S0036	Federal Court of Australia	Not received	
S0040	Family Court of Australia	18/07/05	Plans and arrangements updated December 2004. Operator training course currently under development with Chubb. Details of Wilson training have been provided and waiting on comment.
S0047	Geoscience Australia – Geospatial & Earth Monitoring Division	5/08/05	No change
S0052	Dept of Parliamentary Services	23/06/05	No change
S0055	Dept of Environment & Heritage Aust Antarctic Division	20/07/05	No change
S0056	Australian Federal Police	27/07/05	Transfer of some items requested and awaiting approval. The National Guideline updated in February 2005. Four Radiation safety training sessions conducted.
S0077	National Museum of Australia	01/08/05	Plans and arrangements reviewed and updated in May 2005. New source inventory worksheet in progress. Radioactive objects are being moved to new storage boxes. One UV source is being disposed of.

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S0079	Dept of Foreign Affairs & Trade	04/07/05	No change.
S0080	Australian War Memorial	28/07/05	Minor Changes to source inventory. Plans and arrangements under review.
S0090	Silex Systems Ltd	05/07/05	No change. Copies of quarterly OH&S inspection results provided
S0120	Australian Quarantine and Inspection Service	27/07/05	Minor changes to source inventory. Licence application for the use of UV apparatus under review.
S0127	Telstra	17/06/05	No change
S0129	Australian Securities & Investments Commission	01/07/05	No change
S0135	Dept of Immigration, Multicultural & Indigenous Affairs	25/08/05	Minor planned changes to source inventory. Plans and arrangements under review.
S0142	National Measurement Institute	01/08/05	Possible breaches have been addressed relating to an April 2005 letter from the CEO of ARPANSA. An application to extend the existing source licence was received by ARPANSA on 27 June 2005. Updating of source inventory shows various changes resulting from transfer of controlled sources.
S0150	Australian Postal Corporation	27/06/2005	Safe Operating Procedures for the use of baggage x-ray units updated on the 12 May 2005.
S0151	Attorney-General's Department	15/07/05	Staff attended radiation safety awareness course conducted by Australian Federal Police Protective Service Training Section.

Note 1 'F' indicates a Facility Licence and 'S' indicates a Source Licence

Note 2 'No change' in relation to a Source Licence or Facility Licence means that during the quarter:

- no breach of licence conditions was reported under regulation 45
- no accident was reported under regulation 46
- no relevant change was reported under regulation 52
- no transfer or disposal of controlled material or controlled apparatus was reported under regulation 53
- no change to the inventory of controlled material or controlled apparatus was reported