Inspection report

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| **Licence holder:** Department of Infrastructure and Regional Development & Cities (DIRDC) | **Licence number:** S0288 |
| Location inspected: Christmas and Cocos (Keeling) Islands | **Date/s of inspection:** 6 and 11 October 2018 |
| **Report no:** R18/12570 |
| An inspection was conducted as part of ARPANSA’s baseline inspection program to assess compliance with the *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act), *the Australian Radiation Protection and Nuclear Safety Regulations 1999* (the Regulations), and conditions of Source Licence S0288. The scope of the inspection included an assessment of DIRDC performance at Christmas and Cocos (Keeling) Islands against the Source Performance Objectives and Criteria (PO&Cs). The inspection consisted of a review of records, interviews, and physical inspection of sources. BackgroundThe DIRDC holds a licence under section 33 of the Act to use ionising radiation apparatus for baggage inspection via a private sector contractor at the airports at Christmas and Cocos (Keeling) Islands.The main code applicable to these devices is:* Radiation Health Series 21 *Statement on cabinet X-ray equipment for examination of letters, packages, baggage, freight and other articles for security, quality control and other purposes (1987)* (RHS21)

ObservationsIn general, the management of radiation safety at Christmas and Cocos (Keeling) Islands was found to be satisfactory. However, there appeared to be a non-compliance at each location in relation to two pieces of equipment that did not match the information contained in the Source Inventory Workbook (SIW).Performance reporting and verification and configuration controlDIRDC sources were maintained in its SIW although for two of the units listed, one on each island, the details (e.g. make, manufacturer, serial no., operating parameters) listed in the SIW did not match those seen during the inspection. This could represent potential non-compliance with Regulation 53(1) of the Regulations in that the previous equipment appears to have been disposed of without the approval of the CEO of ARPANSA (Regulation 53(1)).The quarterly report of October–December 2017 did, however, include information relating to the acquisition and disposal of the two baggage inspection units. In light of the fact that this quarterly report had identified the change of equipment, the inaccuracy in the SIW is considered to be an area for improvement.DIRDC provides ARPANSA with timely quarterly reports although a recent review of this licence has reduced the frequency of reporting requirement from quarterly to six monthly. The contents of the last four quarterly reports did not contain any information relating to:* source disposals in accordance with Regulation 53 of the Regulations
* incidents, or
* the review and/or revision of plans and arrangements.

Other than the potential non-compliance outlined above, the inspectors found that all information, or lack thereof, was provided appropriately.DIRDC provided the inspection team with a copy of its Health and Safety Policy (HSP) and standard operating procedures 023, 033, 041 and 042 for the baggage inspection equipment for review before the inspection. These documents made up DIRDC’s plans and arrangements on radiation safety and DIRDC had reviewed them within the last 3 years, the oldest being on 14 March 2016 for SOP23, SOP33 and SOP42.Inspection, testing and maintenance (servicing) Copies of recent maintenance/service reports of the baggage X-ray machines performed by the supplier were made available to the inspection team for review. These service reports included radiation monitoring results and confirmed the correct functioning of warning lights and interlocks.Training The HSP requires that each person using the X-ray equipment be appropriately trained in health and safety and operation of the units through internally delivered courses. A copy of the radiation safety training course presentation was provided for review and records of appropriately trained officers, including dates of course completion, for the baggage inspection equipment were observed. Only those persons who have completed the relevant training and deemed authorised users were permitted to operate the baggage inspection equipment. SecurityThe baggage inspection units used to examine checked-in baggage are located in the ‘clean’ area of both airports and the public are not permitted access.The baggage inspection units used to examine carry-on baggage are, by definition, located in publicly accessible areas of the airports however, trained staff are positioned at the entry and exit ports as well as the assessment screen at all times that the equipment is in operation. The security procedures in place are deemed adequate for the baggage inspection units. The DIRDC did not deal with nor were they licensed to use radioactive sources.Radiation protectionAll baggage inspection units at both airports were fitted with indicator lights, labels, and warning signs in accordance with RHS21. These were checked at the time of inspection and were functional as per the requirements of RHS21. Radiation measurements taken around the equipment during operation showed compliance with the maximum permitted radiation levels as specified in RHS21.Shielding for the baggage inspection unit comprised a flexible curtain at the entry and exit parts of the conveyor line and fixed metal shielding around the unit consistent with the requirements of RHS 21. Recent survey results demonstrated the shielding was effective in controlling scatter.FindingsThe inspection revealed the following potential non-compliance:* The carry-on baggage inspection units at both Christmas Island and Cocos (Keeling) Islands airports (2 units) listed on the current SIW appear to have been disposed of and replaced with similar units without the approval of the CEO. Regulation 53(1) of the Regulations states, in part:

 The holder of a licence may only dispose of controlled apparatus … with the approval of the CEO.The inspection revealed the following **area for improvement**:* The details of all baggage inspection equipment did not match the details listed in the SIW.
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*In response to any potential non-compliance, the licence holder must carry out its responsibilities under Regulation 45*

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