Australian Government
Australian Radiation Protection and Nuclear Safety Agency

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Inspection report

Licence holder: Department of Home Affairs (Home Affairs)	**Licence number:** S0092
Location inspected: Christmas Island	**Date/s of inspection:** 8 October 2018
	Report no: R18/12458

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 S0092.

The scope of the inspection included an assessment of Home Affairs' performance at Christmas Island against the Source Performance Objectives and Criteria (PO&Cs). The inspection consisted of a review of records, interviews, and physical inspection of sources.

Background

Home Affairs, formerly the Department of Immigration and Border Protection, holds a licence under section 33 of the Act to use over 170 ionising and non-ionising devices for baggage and parcel inspection at its Australian facilities, such as airports and seaports along with medical apparatus on its ships.

The main codes and standards applicable to devices are:

- 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)
- Australian/New Zealand Standard *Safety in laboratories – Non-ionizing radiations-Electromagnetic, sound and ultrasound (2004)* (AS/NZS 2243.5:2004) (the NIR Standard)
- Australian/New Zealand Standard *Safety of laser products Part 1: Equipment classification* (AS/NZS IEC 60825-1:2014) (the laser Standard)
- Australian/New Zealand Standard *Safety of laser products Part 14: A user's guide* (AS/NZS IEC 60825-14:2011)

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Observations

In general, the management of safety margins at Christmas Island was found to be satisfactory.

Performance reporting and verification and configuration control

The details of Home Affairs' sources are maintained in its Source Inventory Workbook (SIW). The details of the baggage inspection X-ray unit and the laser device (e.g. make, manufacturer, serial no., operating parameters) were consistent with those listed in the SIW.

Home Affairs provides ARPANSA with timely quarterly reports. The contents of the information within contained relevant information, including:

- information regarding source transfers and disposals in accordance with Regulation 53 of the Regulations
- information regarding acquisitions of new sources
- information detailing the implementation of corrective actions from previous inspections, and
- information indicating that plans and arrangements had been reviewed and revised.

The inspectors found that all information was provided satisfactorily.

A copy of the Radiation Management Plan (RMP) and standard operating procedures for both the baggage inspection equipment and the laser device were provided. Due to logistical reasons however, these could not be supplied until after the inspection. These documents made up Home Affairs' plans and arrangements on radiation safety and Home Affairs had reviewed them within the last 12 months.

Inspection, testing and maintenance (Servicing)

Copies of recent maintenance/service reports provided by the supplier for the baggage X-ray machine were made available to the inspection team for review. These service reports included radiation monitoring results and confirmed the correct functioning of the interlocks.

Training

The RMP requires that each person using the X-ray unit is appropriately trained in radiation safety and operation of the units through internally delivered courses. Staff who use the laser device also require appropriate training. Records were provided of authorised officers, including dates of course completion, for both the baggage inspection equipment and the laser device.

Only those persons who have completed the relevant training can operate the baggage equipment or the laser via a unique login code.

Security

The baggage inspection unit, being used to examine check-in baggage, was located in a 'clean' area of the airport where the public were not permitted to access. Similarly, the laser device was in a secure building in the township to which the public had no access.

Both the baggage X-ray unit and the laser device required a pass or code to operate further enhancing security measures.

Radiation protection

Both the baggage inspection unit and the laser were fitted with indicator lights, labels, and warning signs in accordance with RHS21 and the laser standard respectively. These could not, however, be checked for operation at the time of inspection as the Home Affairs employee did not have appropriate access.

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.

Eye protection was provided for use when laser procedures were taking place.

Findings

The licence holder was found to be in compliance with the requirements of the Act, the Regulations, and licence conditions.

No written response to this report is required

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