



Australian Government

Australian Radiation Protection and Nuclear Safety Agency

## INSPECTION REPORT

<b>Licence Holder:</b> ANSTO	<b>Licence Numbers:</b> F0240, F0243, S0045
<b>Location inspected:</b> Lucas Heights, NSW	<b>Date of inspection:</b> 8 - 9 September 2015
	<b>Report No:</b> R15/12564
<p>An inspection was conducted under Part 7 of the <i>Australian Radiation Protection and Nuclear Safety Act 1998</i> (the Act). The purpose of the inspection was to assess compliance with the Act, applicable regulations, and licence conditions. The inspection was conducted as part of ARPANSA's baseline inspection program.</p> <p>The scope of the inspection included an assessment of ANSTO LifeSciences' performance across all areas identified in the facility licence Performance Objectives and Criteria in its management of the Gamma Technology Research Irradiator (GATRI) and the Gamma Irradiation Suite (GIS). Similarly the management of sources held by ANSTO LifeSciences was assessed against the source licence Performance Objectives and Criteria.</p> <p><b>Background</b></p> <p>ANSTO LifeSciences uses gamma irradiation from GATRI for materials and biology related applications. The GATRI and GIS facilities, together with controlled material and controlled apparatus, are used for biological research purposes.</p> <p><b>Observations</b></p> <p>ANSTO LifeSciences' facilities and laboratories are well maintained, apart from the building housing the PET/CT scanner. This building is currently being prepared for demolition which has raised some WHS issues. However, the scanner and associated calibration sources continue to be operated safely. There are plans to relocate these sources.</p> <p>In some instances, ANSTO LifeSciences has not routinely reviewed its emergency requirements. Examples include:</p> <ul style="list-style-type: none"> <li>• The GATRI Emergency Plan expired in March 2015 and has not been renewed</li> <li>• The GIS annual building drill has not been undertaken in the previous 12 months</li> <li>• The Business Recovery Plan updated in June 2015 did not record the exercise conducted at GATRI on 5 February 2015</li> </ul> <p>In relation to Inspection, Testing &amp; Maintenance, ANSTO LifeSciences has not routinely checked all safety related devices. Examples include:</p> <ul style="list-style-type: none"> <li>• The GIS "radiation on" warning light is not checked as part of routine maintenance procedures</li> <li>• The GIS emergency lighting is also not checked as part of routine maintenance procedures</li> <li>• Both safety lights identified above failed during the physical inspection of the GIS</li> </ul>	

In relation to Radiation Protection, ANSTO LifeSciences has not recently completed accurate radiation surveys. Examples include:

- Two of the three most recent X-ray leakage surveys of CT/PET scanners failed to adequately identify the apparatus; wrong location and incorrect serial numbers were noted
- An annual GIS survey was not undertaken during 2014, as required by I4105 *Plans and Arrangements for GIS*
- For some sources held in the PET/CT Laboratories, annual wipe tests were not conducted as required by AG2471 *Safe Management of Licensable Sources*
- Fortnightly surveys of research laboratories were not conducted as scheduled; laboratories in one building were last surveyed on 28 July 2015, while other laboratories were last surveyed on 9 July 2015

Inspectors also noted that the safety documentation did not contain reference to or acknowledge that ANSTO LifeSciences complies with Australian Standard AS2243.4 *Safety In Laboratories (Ionising Radiation)*.

The following good practice was identified:

- Staff are required to sign Safe Work Method & Environmental Statements to acknowledge they have been read, understood and will be implemented.

### **Findings**

At the time of inspection, ANSTO LifeSciences was compliant with the Act, the Regulations, and licence conditions.

ANSTO LifeSciences performance may be improved by addressing the following performance deficiencies:

#### **Performance Deficiencies:**

1. In some instances ANSTO LifeSciences has not routinely reviewed its Emergency Arrangements
2. ANSTO LifeSciences has not undertaken routine maintenance checks of safety lighting at the GIS facility
3. ANSTO LifeSciences has not recently completed routine health physics surveys in a timely and accurate manner

*No written response to this report is required.*

*It is expected that actions to address any performance deficiencies will be taken in a timely fashion.*