



INSPECTION REPORT

Licence Holder: Parks Australia	Licence Number: F0093
Location inspected: South Alligator Radiological Containment Facility, Kakadu National Park	Date of inspection: 27-28 September 2011
	Report No: R11/12857

This inspection was conducted under Part 7 of the *Australian Radiation Protection and Nuclear Safety Act 1998* (the Act). The purpose of the inspection was to inspect the South Alligator Containment Facility cover following rehabilitation and repair as a result of erosion in the 2009-2010 wet season.

The inspection consisted of discussions with Parks Australia and Office of the Supervising Scientist representatives, a physical inspection of the radiological containment, measurement of ambient radiological conditions, and an exit meeting to discuss actions arising as a result of the inspection, and future licensing and monitoring requirements for the facility.

Findings:

- The diversionary drain built to the north side of the containment was observed to be approximately 400 m long. As result of the additional drainage installation, erosion of the containment cover in the 2010-2011 wet season has been minimal.
- The revegetation of the containment cover has been very successful.
- Ambient dose rates 1 metre above the containment cover are in the range 0.16-0.18 $\mu\text{Sv}/\text{hour}$ which is consistent with normal background. Gamma spectrometry measurements analysed later indicated no prominent radionuclides present.
- A relatively deep erosion gully, up to 50 cm deep, was observed to the South West of the containment, and appears to have been missed during the repair work undertaken in August 2011.
- Transfer of responsibilities for the containment will occur from Parks Australia Darwin Office staff to Parks Australia Kakadu staff in the near future. A project plan is being developed to guide this process and future management of the site.

Recommendations:

- Parks Australia repair the erosion gully observed on the South West side of the containment in the 2010-2011 dry season, and reseed the cover areas where rehabilitation has occurred.
- Parks Australia develop a monitoring plan in conjunction with the Office of the Supervising Scientist, and report data to ARPANSA at least twice per year.
- ARPANSA will inspect the containment cover regularly over the next five year period, and will aim to inspect annually.

- Parks Australia will provide a copy of the O’Kane consultants Post Construction Safety Report for the containment, which is due for issue in the next month.
- Parks Australia should consider employing an erosion expert to assist in the management of the containment cover.
- ARPANSA should reissue the Parks Australia licence due to the fact that the facility has moved into the post-closure institutional control phase. The new licence will provide regulatory expectations such as compliance with the Near Surface Disposal Code of Practice (RHS No 35).
- Parks Australia should undertake an updated assessment of the impact of the containment taking account of recently acquired monitoring data. Once levels are proposed, ARPANSA will agree on dose constraint levels with Parks Australia.

Conclusion:

No non-compliances to report.