



Minutes from CSIRO-ARPANSA Liaison Forum Meeting

07 June 2019 (via phone)

Confirmation of Previous Minutes

Minutes from the previous meeting held on 22 August 2018 were confirmed.

Strategic Overview from the CEO of ARPANSA

The main items that were covered included the following:

1. ARPANSA is taking actions on the recommendations and suggestions from the International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) mission in 2018. The Mission Report is available at <https://www.arpansa.gov.au/regulation-and-licensing/regulation/independence/independent-review-of-regulatory-activities/integrated-regulatory-review-service>. Recommendations were made to ARPANSA, jurisdictional regulators and the Australian Government on a number of issues, including waste management.
2. In October 2018, ARPANSA published *Code for Disposal Facilities for Solid Radioactive Waste (RPS C-3)*, which is available on ARPANSA's website at <https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpsc3>. The Code addresses key radiation protection and safety principles, how to assess risks and a range of safety requirements.
3. The CEO of ARPANSA acknowledged the progress that CSIRO has made to date regarding the safe management of their inventories of controlled material and apparatus.

Strategic Overview from the CEO of CSIRO

The main items that were covered included the following:

1. CSIRO has undertaken a range of organisational improvements to strengthen radiation protection and nuclear safety management. These changes have focussed upon:
 - a. Developing a supportive network of radiation safety experts across 57 sites
 - b. Training and up-skilling a team with a more coherent, networked and unified culture
 - c. Upgrading CSIRO's knowledge of their inventories across all locations and,
 - d. Identifying realistic pathways to better manage their inventory.
2. The CEO of CSIRO welcomed the support and feedback provided by ARPANSA inspectors in providing clear guidance through the past 12 months of engagements, and highlighted the value that a strong radiation safety culture can have on conventional health and safety initiatives within the organisation.

ARPANSA Compliance Monitoring

Compliance Monitoring and Enforcement Lessons Learned (Chief Regulatory Officer of ARPANSA)

CSIRO is a geographically dispersed organisation with 57 sites located across Australia. This financial year ARPANSA has conducted 8 inspections at various CSIRO sites and 2 additional inspections are planned to be completed by the end of June.

Through these compliance monitoring activities inspectors have identified 13 areas for improvement and no non-compliances. Typically the areas that required the most attention was in regard to documentation management practices, followed closely by the correct use of radiation safety signage and adherence to equipment maintenance schedules.

Licence costing arrangements – CSIRO Perspective (Chief Operating Officer of CSIRO)

CSIRO queried the change in licence fees for 2019 recognising that CSIRO will experience a higher than normal increase for 2019-2020 than in previous years, and expressed concern that the model may work against proactive consultation between waste holders and the regulator.

ARPANSA explained the Australian Government's policy for which, in agreement with recommendations from the ANAO, ARPANSA has modified the charging system in order to ensure full cost recovery of regulatory activities.

It was further emphasised that improved performance of the regulated entity can translate into reduced oversight and thereby, reduce compliance costs.

CSIRO expressed some concern that the model may create a disincentive to communicating proactively with the regulator if this means that compliance costs may rise, although this risk is manageable. CSIRO suggested that, when reviewed, the charges may include a base component to incorporate communication and consultation, as well as charges for visits and inspections.

ARPANSA reinforced that this risk is small and that any engagement with the regulator ultimately promotes safety and is therefore an investment for regulated entities. ARPANSA is satisfied with the forthcoming attitude among CSIRO staff and had not noticed any reluctance to raise issues ARPANSA's regulatory officers.

CSIRO radiation protection and nuclear safety matters

Woomera Protected Area summary of findings from field measurement projects

Between 2018 and 2019 a series of field trips were performed by CSIRO in order to conduct pre-characterisation work at the site. In May an inspection was also conducted by ARPANSA and a site visitation by CSIRO's leadership team was also held during this month.

The Data 61 robotics team of CSIRO were able to inspect over 50% of the inventory holdings using Remotely Piloted Vehicles (RPV's). Very low dose rates were recorded (typically less than 1 micro-sievert per hour on contact) and approximately 3-4% of the inspected drums were found to be between 0.75-1.5 times above background levels. The original approximation that 200 cubic meters of material would be over the exemption limit at this site appears to have been an overestimation. It was also observed that the under-side of the inspected drums were in good condition with no signs of corrosion or degradation at the base. Radon

emanations were detectable and followed an expected diurnal pattern, again with low concentrations of the order of 50 becquerel m⁻³, depending on the time of day. There was no detection of other radioactive materials other than those from the thorium and uranium decay series.

A number of improvements have been made to the plant area surrounding the waste store, including the installation of concrete bunding, a newly installed decontamination station and the installation of a number of active and passive radon monitors.

Next steps for Woomera Protected Area inventory

ARPANSA commended the efforts to date and encouraged continued efforts in order to fully characterise the inventory. CSIRO will establish a project to access specific drums of interest and to conduct more detailed technical assessments. CSIRO will consult Defence as part of the process.

CSIRO-wide Waste Consolidation Project

CSIRO intends to consolidate legacy materials and disused radioactive sources into one location that will also allow for the appropriate pre-conditioning and packaging for the following:

- a. Repatriation to the original supplier where possible, and
- b. Ultimate disposal to a national waste management facility when available.

ARPANSA advised that these plans are consistent with international best practice, particularly the IAEA's recently published Guidance on Disused Radioactive Sources. It is expected that a licence application will be made to ARPANSA in order to review the arrangements for waste consolidation.

General business

ARPANSA and CSIRO agreed to work together to share the lessons learned from the Woomera Protected Area waste activities as a case study at the next annual licence holder forum.

The next CALF meeting date is to be advised.