The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Stephen Long
OUR MISSION:
Protection of people and the environment from the harmful effects of radiation

Mission and Objectives

- Protect the public, workers, and the environment from radiation exposure
- Promote radiological and nuclear safety and security, and emergency preparedness
- Promote the safe and effective use of ionising radiation in medicine
- Ensure effective and proportionate regulation and enforcement activities
Structure

CEO
Carl-Magnus Larsson

- Corporate Services
- Office of the CEO
- Medical Radiation Services
- Regulatory Services
- Radiation Health Services
  - Assessment & Advice
  - Monitoring and Emergency Response
  - Radiation Protection Services

- Medical Imaging
- Radiotherapy
- Australian Clinical Dosimetry Service
- Regulatory Assurance
- Facility Licensing
- Source Control
- Continuous Improvement

- 130 Personnel
- 2 Campuses:
  - Melbourne
  - Sydney
Monitoring and Emergency Response

• Radiation Monitoring Networks
  – CTBT Radionuclide Monitoring Stations
  – Australian UV Monitoring Network
• Instrumentation and Measurement Systems
  – CTBT Radionuclide Laboratory
  – Radon Chamber
  – Laboratory Instruments
    • HPGe Gamma-spectrometers
    • Liquid Scintillation Counters
    • Alpha-spectrometers
• Emergency Response
  – In Situ measurement capabilities
  – Centralised GIS for decision-support

• Radiochemistry Laboratory
  – Sample Preparation
    • Fusion System
    • Microwave digestion
    • Eichrom resin extraction systems
    • Electrodeposition
    • Autodeposition
Assessment and Advice

• Health Consequences
• Dose Assessment
  – ARGOS
  – RESRAD
  – IMBA
  – ERICA
• Radiation Protection Best Practice
• Australian National Radiation Dose Register
To protect the public from the harmful effects of radiation exposure, ARPANSA requires up-to-date scientific knowledge to inform its regulatory activities and to provide evidence-based expert advice.

Engage with:

- International Atomic Energy Agency (IAEA)
- the International Commission on Radiological Protection (ICRP)
- United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)
- the World Health Organization (WHO)
- the International Commission on Non-Ionizing Radiation Protection (ICNIRP)
Projects Involving the Source Term

- Measurement of Caesium and Strontium in seawater
- Collection of dry/wet atmospheric deposition
- Measurement of Radon
- Development of measurement protocols for radiological emergencies
- Development of Reference Accident scenarios
Projects Involving Transfers

• Measurement of radionuclides in foodstuff
• Development and promulgation of modelling tools
• National guide for Radiation Protection of the Environment
Projects Involving Risk Assessments

• Evaluation of radiological component of Environmental Impact Statements
  – Only when proposal involves a ‘nuclear action’ under the Australian Environment Protection and Biodiversity Conservation Act (e.g. Uranium mining)

• Development of system to assess application for construction and operation of Low Level Radioactive Waste Repository

• Evaluation of risk associated with wearing “Scalar Energy Pendant”
THANK YOU

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