OBSERVATIONS FROM COMPLETED ORPAS MISSION
(Asia and the Pacific region)

➢ INDONESIA (2018)
➢ SRI LANKA (2019)

TENG IYU LIN
ATOMIC ENERGY LICENSING BOARD (AELB)
MALAYSIA
Mission date: 4-13 November 2018
Location: Jakarta/Indonesia

- Mohammad Hassan Kharita Team Leader (Qatar)
- Vangeline K. Parami Deputy Team Leader (Philippines)
- Abdul Kadir Ahmad Bazlie Malaysia
- Ichiro Yamaguchi Japan
- Pattama Na Nakorn Thailand
- Renato Banaga Philippines
- Meherun Nahar Bangladesh
- Jim Hondros Australia
- Teng Iyu Lin Malaysia
- Tae-young Lee South Korea
- H. Burçin Okyar Team Coordinator (IAEA)
- Ekaterina Panteleymonova Administrative Assistant (IAEA, Vienna based)

- Mission based around “practical advice” and visits to facilities
- Involvement of regulatory authority in visits (BAPETEN)
Focus of Team

Regulatory Arrangements
Technical Support Organisations
Medical Facilities
Industrial Applications
Industries Involving NORM
Research Reactor
Conduct of Appraisal

- A site visit to the facilities
- Welcome meeting then discussions and interviews with management and operational personnel,
- Review and inspection of documents
  - Evidence of the implementation of the occupational RP arrangements
  - Detailed discussions with HSE / RP personnel
- Monitoring the external radiation dose in the operational areas
- Immediate feedback at close out meeting
- Preparation of report with recommendations for the operator and regulator
Arrangements Reviewed

- Authorization Details
- Management Structure
- Radiation Protection Programme (RPP)
- Control And Accountability Of Radioactive Sources
- Radiation Protection Measures
- Workplace Monitoring Programme
- Individual Monitoring Programme
- Staff Selection, Information And Training
- Emergency Arrangements (Emergency Plans)
- Health Surveillance Programme
- Quality Assurance Programmes
• Indonesian legislation for radiation protection is consistent with the previous version of the International Basic Safety Standards (BSS-115,1996) as recognised by IRRS mission in 2015.

• Progress towards compliance with the current requirements of International Basic Safety Standards (GSR Part 3)

• should apply “graded approach” in policies in authorization, assessment, inspection and enforcement.

• There are the value and great potential of the BALIS on-line Licensing system.
The ORPAS mission:
- compared Sri Lanka’s arrangements for occupational radiation protection against the IAEA Safety standards as the international benchmark for protection and safety of workers.
- exchange information and experience between the team members and official national counterparts.
SRI LANKA - Overview

Mission date: 24 Nov – 2 Dec 2019
Location: Colombo/ Sri Lanka

**Mission based around interview, document checking and visits to facilities**

Note: transportation/logistic limitation

**ORPAS TEAM MEMBERS**

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Focus of Team

REGULATORY BODY
Sri Lanka Atomic Energy Regulatory Council

TECHNICAL SERVICE PROVIDERS
Sri Lanka Atomic Energy Board
  Personal Monitoring Services Laboratory
  Secondary Standards Dosimetry Laboratory
  Radiation Protection and Technical Services Division

OPERATORS
Lanka Hospitals (Pvt) Ltd.
Ceylinco Healthcare Services Ltd.
National Hospital of Sri Lanka - Colombo
National Centre for Non-Destructive Testing and the
National Certification Body for Non-Destructive Testing
Sri Lanka Gamma Centre
Ceylon Petroleum Corporation
Sri Lanka Atomic Energy Board, Central Disused
Radioactive Source Storage Facility
Lanka Mineral Sands Ltd. and Pulmudai Mineral Sand
Factory

RESEARCH AND EDUCATION INSTITUTION
Department of Nuclear Science, University of Colombo
Conduct of Appraisal

• A site visit
• Welcome meeting then discussions and interviews with corporate and operational personnel,
• Review and inspection of documents
  • Evidence of the implementation of the occupational RP arrangements
  • Detailed discussions with Licensing Division (Regulator)
  • Interview with the operators
• Feedback at close out meeting
• Preparation of report with recommendations for the operator and regulator
Arrangements Reviewed

- Act, Regulations and Guidance materials
- Authorization Details – Licence/permit
- Radiation Protection Programme (RPP)
- Control and Accountability of Radioactive Sources
- Inspection reports by the Regulator
- Radiation Protection Measures
- Individual Monitoring Programme
- Staff Selection, Information And Training
FINDINGS

• The Regulator, Sri Lanka Atomic Energy Regulatory Council (SLAERC) intends to replace the current regulations, which are based on the previous version of BSS 115, 1996, with modern regulations based on the current requirements on occupational exposure control of GSR Part 3.

• SLAERC concentrates on the regulation of artificial sources and authorization of individuals. SLAERC should consider the necessary arrangements for the establishment and maintenance of a national dose registry for the control of occupational doses from all exposure situations.

• SLAERC and SLAEB perform some of the same functions eg. conduct training. SLAEC has limited resources and should limit its activities to regulatory functions & apply graded approach and authorized SLAEB for all technical services.

• A significant achievement has been made by the establishment of independent regulatory authority in Sri Lanka, empowered single technical service provider for dosimetry services and calibrations, but recognizes there remains considerable work ahead to develop the national occupational radiation protection programme.

• Implementation of RPP - SLAERC should ensure that a safety assessment is conducted as a basis for establishing a radiation protection program in the respective facilities.
In general,

- the occupational exposure control regime is covered in the regulatory framework of both Indonesia and Sri Lanka.
- the framework is embodied in law and subsequent regulations, orders and rules that includes all the necessary provisions for licensing, control and radiation protection of workers

Recommendation:

- Establishment of Regulations according to the IAEA GSR Part 3 (2014), to cover all exposure situations
- Consider all pathways of occupational exposure - internal and external
- the “graded approach” is a key concept in the international safety standards, and should be applied this in policies of authorization, assessment, inspection and enforcement, in relation to practical occupational radiation protection, emphasis should be given to controlling, monitoring and recording occupational exposures.
MISSION OBSERVATIONS

• Interaction of team members
• Varied skill sets
• Shared learnings
• Active feedback well received
• Participants keen to gain extra knowledge
• Value for:
  • People reviewing
  • Organizations being reviewed
  • Individuals in organizations and regulatory agencies
THANK YOU

VIRTUAL TECHNICAL MEETING ON THE ASSESSMENT AND EVALUATION OF THE OCCUPATIONAL RADIATION PROTECTION APPRAISAL SERVICE (ORPAS)
13-17 September 2021