Case Study: ORPAS Peer review and how NORM is covered
-Occupational Radiation Protection Appraisal Service-

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ORPAS

• An independent review of a Member State’s occupational radiation protection arrangements.
• The appraisal is based on the IAEA safety standards, particularly;
  – General Safety Requirements on Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (No. GSR Part 3)
  – General Safety Guide on Occupational Radiation Protection (No. GSG-7)
Implementation / application of Safety Standards

- Essential for ensuring a high level of safety
- The Agency has to appraise the compliance of these Standards in MSs to ensure they are being applied.
- These appraisals are carried out whenever there is a request from the Member State.

  – **System of regulation and monitoring of occupational exposure – MS responsibility**
  – **The Agency provides an independent appraisal service for some or all aspects of occupational radiation protection.**

- The IAEA offers its Member States a wide array of review services, in which an IAEA-led team of experts compares actual practices with IAEA standards in, for example, regulatory infrastructure, nuclear safety and security, waste management & spent fuel, occupational radiation protection, education & training or the health sector.
- ORPAS is a family member of the Services, such as IRRS, EPREV, EDUTA, ARTEMIS, TranSAS etc. (29 different kinds of review missions & advisory services)
Review missions and advisory services

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Calendar
Calendar of peer review and advisory services

Related resources
Global Nuclear Safety and Security Network; peer reviews and advisory services

News

3 October 2018
3 October 2018
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ORPAS missions are conducted as an independent appraisal service in the field of radiation protection of workers. Such an appraisal is an opportunity for a Member State to have all or some aspects of its occupational radiation protection programme independently assessed and evaluated against international safety standards.

While each Member State is responsible for the radiation safety of occupational radiation protection, the appraisal service is provided by the IAEA at the request of a Member State. The purpose of the assessment is to check the legislative and regulatory framework and practical implementation of a state’s occupational radiation protection programme. ORPAS is appropriate for all types of facilities and activities. It also covers technical and scientific support services or organisations for protection and safety in respect to the assessment of occupational exposure from external sources of radiation and due to the intake of radionuclides. It includes individual monitoring, as well as workplace monitoring, and advisory services. ORPAS promotes self-assessment, a radiation safety culture and in-house customised facilities and activities.

https://www-ns.iaea.org/reviews/default.asp?s=7&l=57
ORPAS - Independent appraisal

• ORPAS provides a cross-cutting review, against the relevant IAEA safety standards, of the regulatory framework for ORP, technical service organisations / providers, and the application of the requirements at all facilities and activities utilising radiation technologies in the host State.

• Provides an opportunity for a MS to have its ORP program independently assessed and evaluated
  – As a part of ORPAS preparation, MS is encouraged to complete the self-assessment in the form of questions (ORPAS questionnaire) tailored to the three set of participants involved in an ORPAS mission.
• The necessary **legislative and regulatory infrastructure for ORP** is in place and functioning

• **Operators** are aware of their responsibilities and have effective occupational radiation protection programmes in place and functioning, with the aim of ensuring optimized radiation protection

• **TSPs** are available and able to provide radiation protection services, in compliance with the GSR Part 3 & GSG-7, in respect of:
  - Assessment of occupational exposure from external sources of radiation
  - Assessment of occupational exposure due to intakes of radionuclides
  - Workplace monitoring
  - Recording of occupational exposure
  - Advisory services

• All involved organizations have **management systems** in place and functioning to ensure ongoing adherence to the standards
Team work- Leader & members

- ORPAS: an assessment conducted by international experts selected
  - Experience in such reviews,
  - Knowledge of international guidance and best practices,
  - Ability to recognise and understand the strengths of different national systems and arrangements.
Site visits during the mission

- Interviews and direct observations to be carried out at sites
- A site visit commences with an opening statement, including a summary of the scope of the ORPAS, the purpose of the visit and matters to be addressed.
- ORPAS Team members must be accompanied by a host country counterpart.
- Main goal is to have direct and face to face interactions.
- Following a site visit, members discuss their findings with the others at the daily team meeting.
ORPAS- Indonesia

- Official request from the Member State, February 2018
- Pre-ORPAS in 2 - 4 May 2018
- Full mission in 4 - 13 November 2018

- National Counterpart
  Mr Ishak HASANUDDIN (Director)
  Directorate of Licensing for Radiation Facilities and Radioactive Sources, BAPETEN
National Counterparts

REGULATOR
- Nuclear Energy regulatory Agency (BAPETEN)

TECHNICAL SUPPORT ORGANISATIONS
- Centre for Technology of Safety and Radiation Metrology (PTKMR, BATAN)
- BATAN Secondary Standard Dosimetry Laboratory (SSDL)
- External Dosimetry Service and Calibration Facility (BPFK, Ministry of Health)
- Nuklindolab.

END-USERS
- Dharmais Cancer Hospital
- MRCCC Siloam Hospitals Semanggi
- Irradiation Facility (PAIR BATAN)
- PT Radiant Utama Interinsco
- PT Rel-Ion Sterilization Services
- PT TIMAH
- PT Pertamina Hulu Mahakam
- Center for Multipurpose Reactor (PRSG BATAN)
- PT INUKI- Nuclear Fuel Element Production

EDUCATION & TRAINING CENTER
- Center for Education and Training of BATAN
- Polytechnique of Health Jakarta II - Ministry of Health, Department of Radiodiagnostic Technique and Radiotherapy
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<th>ROLE</th>
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<td>Administrative Assistant</td>
<td>Ekaterina Panteleymonova (IAEA, Vienna based)</td>
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Site Visits - Interviews
PT Pertamina (oil & gas industry)
PT TIMAH (Tin mining)
Preliminary Report – in numbers

• 112 pages
• 16 appendices
  – 1 for each participating organisation
• 5 annexes
  – References, terms of reference, programs (pre & full) and participants
• 96 recommendations
  – Essential (18), Important (36), Advised (42)
• 8 Good Points
  – good practice in some regulatory arrangements and at facilities

The number of recommendations and good practices is in no way a measure of the occupational radiation protection status and arrangements of participating organisations in the host country
ORPAS Platform for Member States

https://gnssn.iaea.org/main/ORPAS/SitePages/Home.aspx
ORP Webinar # 4

ORPAS: Means to Assess the Occupational Radiation Protection Programme in Your Country

Webinar Series organized jointly with

- Greek Atomic Energy Commission
- Hamad Medical Corporation
- Institute of Radioprotection and Dosimetry
- Australian Radiation Protection and Nuclear Safety Agency

https://www.iaea.org/topics/radiation-safety/webinars
Learning objectives

• ORPAS and other IAEA peer review missions and advisory services focused on nuclear safety and security
• The scope and conduct of ORPAS missions, and
• How to request, prepare, host and follow up an ORPAS mission
• The ORPAS platform

Thank you!

IAEA ORPAS: https://gnssn.iaea.org/main/ORPAS/SitePages/Home.aspx
IAEA ORP Webinars: https://www.iaea.org/topics/radiation-safety/webinars