ORPAS References, Questionnaires and SARIS

Technical Meeting on the Assessment and Evaluation of the Occupational Radiation Protection Appraisal Service (ORPAS)

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Objectives

- ORPAS References
- ORPAS Questionnaires – General Information
- Purpose of ORPAS Questionnaires
- SARIS / ORPAS Questionnaires
- Completion of ORPAS Questionnaires
- Changes of ORPAS Questionnaires
- IAEA Self assessment tool
- e-SARIS Spanish version updating
- Way Forward
ORPAS References

• ORPAS Guidelines
• IAEA Basic Safety Standards (GSR Part 3) is the core component
• Safety Fundamentals and other related Safety Requirements are also used in an ORPAS review
Below is the IAEA reference material that is generally used for the ORPAS reviews:


ORPAS References

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- INTERNATIONAL ATOMIC ENERGY AGENCY, SARIS Guidelines, IAEA Services Series No. 27, IAEA, Vienna (2014).


Below is the IAEA reference material that is generally used for the ORPAS reviews:


- INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation Protection and NORM Residue Management in the Production of Rare Earths from Thorium Containing Minerals, Safety Reports Series No. 68, IAEA, Vienna (2011).
ORPAS References

Below is the IAEA reference material that is generally used for the ORPAS reviews:

• INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation Protection and NORM Residue Management in the Titanium Dioxide and Related Industries, Safety Reports Series No. 76, IAEA, Vienna (2012).

• INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation Protection and Management of NORM Residues in the Phosphate Industry, Safety Reports Series No. 78, IAEA, Vienna (2013).

• INTERNATIONAL ATOMIC ENERGY AGENCY, Occupational Radiation Protection in the Uranium Mining and Processing Industry, Safety Reports Series No. 100, IAEA, Vienna (2020).

• INTERNATIONAL ATOMIC ENERGY AGENCY, Radiation Protection and Safety in Veterinary Medicine, Safety Reports Series No. 104, IAEA, Vienna (2021).

• INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL LABOUR OFFICE, Radiation Protection against Radon in Workplaces other than Mines, Safety Reports Series No. 33, IAEA, Vienna (2003).


ORPAS Questionnaires – General Information

• ORPAS questionnaires cover the different aspects of occupational radiation protection arrangements that need to be evaluated.
• The ORPAS questionnaires are addressed to each national counterpart:
  ➢ the regulatory body;
  ➢ the operators (licensees or registrants);
  ➢ the technical service providers (TSP).
• ORPAS questionnaires are part of the self-assessment during the preparatory phase of the mission.
• The questionnaires are available on the ORPAS platform: https://gnssn.iaea.org/main/ORPAS/questionnaires/SitePages/Home.aspx
• The ORPAS questionnaires are currently available in English.
ORPAS Questionnaires - General Information II

• The questionnaires were developed from the GSR Part 3 and the supporting safety guides, mainly GSG-7.
• It should be noted that the questionnaires, address the technical and organizational aspects of occupational radiation protection for both normal operation and emergencies.
• The questionnaire is the advance reference material (ARM) for a typical ORPAS review.
Purpose of ORPAS Questionnaires

• The use of the questionnaires is intended:
  ➢ To provide an effective and efficient information collection technique;
  ➢ To provide a complete information database upon which to base recommendations;
  ➢ To assist in achieving consistency across different missions;
  ➢ To provide a standard recording format for incorporation into the country profile.
The questionnaires have been incorporated in a computer software programme called ‘self-assessment of regulatory infrastructure for safety’ (SARIS), which automates and streamlines the use of the questionnaires and the production of reports.

The national counterparts can select how to conduct the self-assessment, either by completing the ORPAS questionnaires or by using the SARIS ORPAS module.
Completion of ORPAS Questionnaires

• A six to nine-month time interval between the preparatory meeting and the ORPAS mission is typically needed to enable the host country to complete its preparation in a timely manner (a longer period might be needed, in particular where documents have to be translated into English).

• Completion of ORPAS questionnaires could require several months depending on the extent of facilities and activities as well as technical service providers and regulatory body in the host country and staffing level of the host institute.

• If the host country does not provide the completed ORPAS questionnaires and advance reference material in time to support the mission, the mission may be postponed. However, this step is only taken as a last resort and the decision is made by the IAEA Coordinator in consultation with the ORPAS Team Leader and IAEA management.
Completion of ORPAS Questionnaires II

- The basic structure of the questionnaires has been chosen to enable them to be used before the mission by the host country as well as by the review team.
- To facilitate efficient completion, most questions are intended for ‘Yes/No’ responses, but always with a follow-up for further (brief) explanations where appropriate.
- In general, this means that no justification is needed for responses that meet the accepted standards although evidence needs to be provided to justify the response.
Changes of ORPAS Questionnaires

- Following changes have been made:
  - Updating of references (to harmonise them with GSR Part 3 and GSG-7);
  - Terminology (according to new ORPAS Guidelines);
  - Design (to make it more user-friendly).
### 13 Occupational Radiation Protection at End User Facilities and Activities

**Primary Module: Authorisation Details / Transport of Radioactive Material**

<table>
<thead>
<tr>
<th>QID</th>
<th>SQID</th>
<th>CTYPE</th>
<th>References</th>
<th>Primary Question</th>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Primary</td>
<td>Safety Standards</td>
<td>Are you Licensed or Registered or has your use been notified?</td>
<td>Yes No OC</td>
</tr>
</tbody>
</table>

**Expectation**
Subject to the End User you are Licensed or Registered or your use has been notified.

**Help**
Select Yes or No above and if desired, enter notes or comments here.

### GSR Part 3, Paragraphs 3.5, 3.7, 3.8

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<tr>
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<th>Subsidiary Question</th>
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<td>1.1</td>
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<td>Safety Standards</td>
<td>Define which License, Registration or Notification</td>
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**Expectation**

**Help**

Enter notes or comments here.

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<th>Subsidiary Question</th>
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<tbody>
<tr>
<td>1.2</td>
<td>1.2</td>
<td>Text</td>
<td>Safety Standards</td>
<td>Please give the date of the License or Registration or Notification.</td>
<td>SQID 1.3</td>
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**Expectation**

**Help**

Enter notes or comments here.

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<th>References</th>
<th>Subsidiary Question</th>
<th>Next Question</th>
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<tbody>
<tr>
<td>1.3</td>
<td>1.3</td>
<td>Text</td>
<td>Safety Standards</td>
<td>If an expiry date applies to your license, registration, notification give the expiry date or enter &quot;None&quot;</td>
<td>SQID 1.4</td>
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</table>

**Expectation**

**Help**

Enter notes or comments here.
ORPAS Questionnaires – Virtual meeting summary records (October 2020)

• It was noted that it is necessary to prepare new Questionnaires for:
  – Safety Assessment
  – Optimization
  – Safety Culture and Leadership
  – Calibration capabilities (jointly with NAHU-DMRP)
  – National Dose Registry
  – Ventilation systems for relevant facilities
  – Radioactive waste management (including effluent management)
  – NORM (for different industrial operations)
SARIS Software

• eSARIS is an IAEA-developed web-based tool, primarily created for internal review of regulatory body processes and performance that helps users align their regulatory activities with the IAEA safety standards.

• The SARIS methodology and software tool can be used by all Member States, irrespective of the status of their national safety infrastructure.

• Self-assessment enables users to verify whether an organization performs its functions in line with the IAEA safety standards and whether its culture for continuous improvement is sufficiently maintained.
SARIS Software

• How it works?

- e-SARIS asks questions based on IAEA safety standards and on international instruments.
- The responses enable countries to perform an internal analysis and review supporting evidence against the IAEA safety standards.
- Helps to identify areas for improvement.
- Leads to the development and implementation of an action plan for continuous improvement.

IAEA evaluation and advisory Missions
SARIS Software V2

Tool for Self-assessment of Regulatory Infrastructure for Safety

Including a module for operators and technical service providers based on GSR Part 3 requirements

Operator variant (end-users and TSOs)
SARIS Software V2 “Self assessment variants”

Choose Variant

Self-Assessment Variants

- **IRIS Variant**
  - The IRIS variant is for countries embarking on a nuclear power programme when establishing their safety infrastructure for nuclear power. The question-sets are based on SSG-18.

- **Operator Variant**
  - These question sets (currently, largely based on GSR Part 3), are for service providers and the end users of radiation technologies.

- **Regulations Comparator Variant**
  - These question sets are for making assessment of the content of national regulations for compliance with IAEA Safety Standards such as the GSR Part 3.

- **SARIS Variant**
  - These question sets are for comprehensive assessment of the national framework for nuclear and radiation safety. These are also used by countries preparing to receive an IAEA IRRS mission.

Reviewers Variants

- **IRRS Variant**
  - This variant is used by international experts participating in IRRS missions. It facilitates the development of their observations in the context of the completed self-assessment provided as part of the IRRS advance reference material. This variant is also used to assist the IRRS Review Team in consolidating the report of the IRRS mission.
SARIS Software “Current Status- English version”

- GSR Part 3 Interim (2011) and the 3 former occupational safety guides RS-G1.1, 1.2 and 1.3.
SARIS Software “Current Status - English version”
First Stage
• Questionnaires translated to Spanish.
• Updated references.
• Some useful changes based on the experience of the end-users and TSOs.

Currently…
• Comprehensive review of the structure and translation of questionnaires.
• Reporting the identified improvements to be performed.
• Based on this review, a preliminary review of the English version was conducted, and conclusions and recommendations were made.
SARIS Software (new version in Spanish)

Several modules in SARIS have reference only to GSR Part 3. New references of GSG-7 were added in most questions.

In some cases, in SARIS the reference is a complete Chapter or requirement. In several questions, an individual paragraph was assigned to be more specific.

- Planned Exposure Situations
  - Req 19: Responsibilities of the regulatory body
  - Req 20: Requirements for monitoring and recording of occupational exposure
  - Req 21: Responsibilities of employers, registrants and licensees
  - Req 22: Compliance by workers
  - Req 23: Cooperation between employers, registrants and licensees
  - Req 24: Radiation protection programme
  - Req 25: Assessment of occupational exposure and workers’ health surveillance
  - Req 26: Information, instruction and training
  - Req 27: Conditions of service
  - Req 28: Protection and safety for female workers and for persons under 18 years of age

- Emergency Exposure Situations
  - Req 45: Protection of emergency workers

- Existing Exposure Situations
  - Req 52: Protection of workers in existing exposure situations
SARIS Software (new version in Spanish)

Questionnaire 12: Technical services

New structure
Modules divided

External Dosimetry Services
Internal Dosimetry Services
Dose Records Keeping Services
Workplace Monitoring Services
SARIS Software (new version in Spanish)

• Q14 has the references of GSR Part 3, and now it also has some references to paragraphs and pages according to the new publication SSG-46 for medical uses.

Medical Exposure Situations

- Req. 34: Responsibilities of the government specific to medical exposure.
- Req. 35: Responsibilities of the regulatory body specific to medical exposure.
- Req. 36: Responsibilities of registrants and licensees specific to medical exposure.
- Req. 37: Justification of medical exposures.
- Req. 38: Optimization of protection and safety.
- Req. 39: Pregnant or breast-feeding female patients.
- Req. 40: Release of patients after radionuclide therapy.
- Req. 41: Unintended and accidental medical exposures.
- Req. 42: Reviews and records.
Way Forward

• To update the English version based on the structure and content of the questionnaires in the Spanish version.
• SARIS questionnaires should be assumed as ORPAS questionnaires.
• To organize regional workshops on the use of the self-assessment tool. (already planned for LA during IV-Q-2021).
Thank you!