ORPAS Training for the Appraisal Team
- Mutual Learning Opportunities -

H. Burçin Okyar
Occupational Radiation Protection Unit
Radiation Safety & Monitoring Section, NSRW
Developed with guidance from Workshops

• 2019 Workshop
• Training for reviewers on ORPAS methodology including practical sessions on assessment of ARM
• Introduction of strategy to conduct interviews for regulatory aspects of occupational exposure control, different types of TSPs and operators including assessment of reviewer’s performance
• Practical session “Agendas of such events and material for practical sessions could be prepared in consultation with the ORPAS reviewers”
2020 Workshop

• Specific recommendations
  • Team: Develop a review checklist and conduct an initial team training and meeting to discuss first impressions (before the preparatory meeting)
  • Depending on the country request: Training on the conduct of RP measurements such as dose rate and ventilation system (fume hoods and hot cells) measurements. “These measurements were found to be very useful in verifying equipment design and performance as well as in identifying key safety issues. “ORPAS reviewers training may include topics for such measurements.”
  • Narrow scope mission: Training on occupational radiation protection for the host country
  • Prepare a package to be used for virtual events
2020 Workshop

• Different formats and content
  • Train the trainers
  • Potential Reviewers
• SARIS and Qs
• Pre-mission training for the host country
• Training during the preparation period, “Training activities could be considered as an opportunity to review of competence of ORPAS team with different roles and responsibilities. Technical training could be considered according to the needs of each Region”
• Training on interview (mimic possible scenarios) and report preparation
Training on ORP

- Training on ORP, based on GSR Part 3 and GSG-7
- Downloadable in ppt format
- Lectures in English and Spanish

https://nucleus.iaea.org/sites/orpnet/home/SitePages/Home.aspx
ORPNET, e-learning

IAEA launches new online training course in occupational radiation protection

The IAEA has released new training material on occupational radiation protection. The material is based on GSG-7, which provides general guidance on the development of occupational radiation protection programmes in accordance with the requirements of GSR Part 3, and addresses the sources of radiation likely to be encountered in workplaces.

The course is publicly available in English within the IAEA’s learning management system.

View the course >>

Occupational Radiation Protection based on General Safety Guide No. GSG-7

- Framework for occupational radiation protection;
- Exposure of workers in different exposure situations;
- Monitoring and recording;
- Assessment of occupational exposure;
- Management system for service providers;
- Occupational exposure control measures;
- Protection of workers in special cases;
- Workers’ health surveillance.

This e-learning course was funded under the IAEA Regional Technical Co-operation Project on Enhancing National Capabilities on Occupational Radiation Protection in Compliance with Requirements of the International Basic Safety Standards (IAEA/SN/029).

https://elearning.iaea.org/m2/

- Available under IAEA’s Learning Management System
- Requires Nucleus account
ORPNET, e-learning

- Harness interactive technologies and communication systems to assist MSs in building their capacity in the field of RP of workers.

- Guidance on
  - Occupational exposure
  - Assess occupational exposure (internal and external);
  - Control exposure due to natural sources at work;
  - Protect emergency workers from radiation exposure;
  - Monitor the health of persons exposed to ionizing radiation at work.

- Customized using the latest digital technologies

- Works best on modern devices and up-to-date browsers

- All courses offer a certification upon successful completion

https://elearning.iaea.org/m2/
Training for ORPAS Reviewers (5 days programme)

Lectures and Interactive Exercise

- Familiarity with the ORPAS Guidelines
- Refreshing module for applicable Safety Standards for benchmarking
- Conduct of
  - Review of ARM, completed Qs, SARIS report
  - First Impression Template
  - Preparatory meeting
  - Mission
  - Follow-up mission
  - Preliminary report

- Roundtables (RB, TSP & Operator), 1 day
- Interactive sessions (simulating situations)
- Tactics for proper interviews
- Implementation by experienced ORPAS reviewers
- Working together / Team spirit

- 1 day (or 2 days for virtual)
- Guideline principles, responsibilities & roles
- Timeline and structure
- 4 modules
- Reference to available material
- 3 days
- 10 modules
Core module / core business; Interviews and drafting preliminary report

- To be conducted in the format of roundtables
  - Requires experience
  - Preparation is the key through ARM
- Social aspects and communication skills pay an important role
- It is not only technical details, “science and values”
- Assessment of safety culture (organisational aspects)
Initial impressions

APPENDIX IV: FIRST IMPRESSIONS TEMPLATE

FIRST IMPRESSIONS ON
THE ORPAS ADVANCE REFERENCE MATERIAL

Name and Country of the Reviewer:

Host Country:

The reviewers are expected to review the completed ORPAS questionnaires and other relevant advance reference material summary reports related to their review areas. They need to be familiar with the IAEA Safety Standards relevant to their review areas (particularly GSR, Part 3 and GSG-7), and with the ORPAS Guidelines. At least two weeks before the mission the reviewer is requested to return her/his first impressions in the format and with the content indicated in this table.

1. ISSUES TO INVESTIGATE AND OPEN QUESTIONS

List in brief (possibly in bulleted format) the potential issues that need further interviewing and/or discussion to clarify whether they present any non-compliance with the IAEA Safety Requirements. List also those issues that are not clearly described in the ORPAS questionnaires or in the advance reference material summary report and need further clarification during the interviews. In the list please identify the location of the issues in the text (e.g. by page number, paragraph number, line number).

- ...
- ...

2. DRAFT RECOMMENDATIONS

List in brief (possibly in bulleted format) those issues found in the ORPAS questionnaire or in the advance reference material summary report which seem to be in non-compliance with an IAEA Safety Requirement related to the review area. Give reference to the requirement non-complied with by identifying the number and subject of the Safety Requirement (e.g. GSR Part 3 Requirement 24. Arrangements under the radiation protection programme) and, if possible, the relevant paragraph (e.g. 3.8). Please also identify the location of the issues in the text (e.g. by page number, paragraph number, line number).

- ...
- ...

- In advance review
- To be completed two week before the mission
- Checklist (!)
Report

Outcomes of an ORPAS mission:

- Areas for improvements of the ORP arrangements to meet IAEA safety standards are identified;
- **Recommendations and suggestions** related to the identified areas for improvement are made;
- Assistance, if necessary, with the development of an action plan to achieve improvements is provided
Recommendations

When to propose

- Where arrangements to meet the IAEA Safety Requirements are missing, incomplete, or inadequately implemented.

• Specific, realistic and designed to result in tangible improvements to ORP programme effectiveness.
  
  - Based on IAEA Safety Requirements, and the basis (i.e. the relevant Requirement(s)) for the recommendation is clearly documented in the mission report.
  
  - All identified non-compliances against IAEA Safety Requirements lead to a recommendation.
  
  - Formulated such that they are succinct and self-explanatory.
  
  - Clearly specify the responsible party and use ‘should’ language (for example, “the regulatory body should...”; “the TSP should...”).
  
  - Recommendations that Counterparts consider may take a long time to be implemented, or that the ORPAS Team considers as a high priority, include interim goals, which would be set out in the ORPAS report and in due course, by agreement, transferred to the host country’s updated action plan.
Suggestions

• Identified opportunities for improvement not directly related to inadequate conformance with IAEA Safety Requirements.
  – Means of achieving this aim.

• Contribute to improvements in national arrangements for ORP but are primarily intended to stimulate the National Counterpart’s management and staff to consider new or different approaches that may enhance performance.
  – Each suggestion has a basis either in IAEA Safety Requirements or in Safety Guides, as appropriate.
  – The basis for the suggestion is clearly documented in the mission report.
  – Suggestions are formulated such that they are succinct and self-explanatory.

• They clearly specify the responsible party and use ‘should consider’ language (for example, “the National Counterpart should consider…”).

• A suggestion may be proposed in conjunction with a recommendation or may stand on its own following a discussion of the associated background.
Good Practices

- Identified in recognition of an outstanding organization, arrangement, programme or performance superior to those generally observed elsewhere.
- It will be worthy of the attention of others as a model in the general drive for excellence.
- Good Practices also reference a basis similar to suggestions, and the basis is clearly documented in the mission report.
- Notable aspects of organization, arrangement, programme or performance that does not fully meet the Good Practice criteria can be highlighted in the text of the report.
Appraisal Findings

Areas for Regulators:
- General Responsibilities of Registrants, Licensees and Employers
- General Responsibilities of Workers
- Legal Regulatory Framework
- Monitoring Programmes
- Technical Services
- Requirements for Radiation Protection Programmes
Mission report

• Format and typical content is available in the Guidelines
• Samples are available at ORPAS CP
• A sample is the ORPAS report to Sri Lanka
## Timeline and Structure

<table>
<thead>
<tr>
<th>Stage</th>
<th>Schedule</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare outline of draft report</td>
<td>Before commencing the review mission</td>
<td>Team Leader</td>
</tr>
<tr>
<td>Prepare preliminary appraisal report (main findings only)</td>
<td>Before the exit meeting in the host country</td>
<td>Team Leader (with the assistance of the whole team)</td>
</tr>
<tr>
<td>Complete preliminary appraisal report (including the reports of national counterparts for specific facilities)</td>
<td>Within two weeks of returning from the host country</td>
<td>Team Leader</td>
</tr>
<tr>
<td>Review completed preliminary appraisal report</td>
<td>Within two weeks of receiving the report from the Team Leader</td>
<td>Reviewers</td>
</tr>
<tr>
<td>Create draft appraisal report</td>
<td>Within two weeks of receipt of all comments from the Team members</td>
<td>Team Leader</td>
</tr>
<tr>
<td>Finalize formatting, final editing and IAEA approval</td>
<td>Within one week of receipt of draft appraisal report from the Team Leader</td>
<td>IAEA Coordinator</td>
</tr>
<tr>
<td>Dispatch draft appraisal report to host country for comments</td>
<td>Immediately</td>
<td>IAEA Coordinator</td>
</tr>
<tr>
<td>Collect comments from all participating organizations in the host country and send to the IAEA Coordinator</td>
<td>Within four weeks of receipt of the report from the IAEA Coordinator</td>
<td>National Coordinator</td>
</tr>
<tr>
<td>Consider host country comments and agree on necessary modifications</td>
<td>Within two weeks of receipt of comments from host country</td>
<td>Reviewers</td>
</tr>
<tr>
<td>Complete final appraisal report</td>
<td>Within one week of agreeing on any modifications with the Team Leader</td>
<td>IAEA Coordinator</td>
</tr>
<tr>
<td>Distribute appraisal report</td>
<td>Within sixteen weeks after the completion of the mission visit</td>
<td>IAEA Coordinator</td>
</tr>
</tbody>
</table>

### PART I
- Introduction
- Description of the Occupational Radiation Protection Appraisal Service
- Outline of the ORPAS procedure
- Details of the meetings and visits during the review mission
- Findings, conclusions, recommendations, suggestions and good practices on review areas (regulatory body, operator and technical service providers)
- Feedback to the IAEA, if any
- Supporting annexes: Participating organizations and list of ORPAS Team members
- About follow up mission or any future actions

### PART II
- Facility descriptions (national counterpart) and list of persons met
- Detailed findings of the individual facilities appraisal
- Conclusions and recommendations
ORPAS Training – to conclude

• Hands-On Training on How to Conduct IAEA ORPAS Missions
  • Goal: Preparing experts to carry out ORPAS reviews
    – Maintaining and refreshing the pool of expert reviewers
• Open to all Member States
• To be organized in 2022
• March/ April 2022
• Most probably virtual
• Training for the ORPAS mission to Slovakia (to be organized depending on the request of host country)
• Seeking for volunteers for long-run Training Programme (where and when needed)
Thank you!

H. Burçin Okyar
Occupational Radiation Protection Unit
Radiation Safety & Monitoring Section, NSRW
h.b.okyar@iaea.org