

**Workshop on
THE BASICS OF
DECOMMISSIONING OF RESEARCH
REACTORS
Manila, Philippines
16-20 October 2006**

AGENDA

Remarks

Presentations should be limited to not more than 2/3rd of the time allocated to a topic. The rest of the time should be left for a report on the actual situation in the Philippines and for discussion. Example: In the case of a 45 minutes time slot the actual presentation should be limited to about 25, maybe 30 minutes. About 5-10 minutes should be allocated to a description of the situation in the host country and the remaining about 5-10 minutes should be left for the discussion of the subject.

An important element in the decommissioning of nuclear facilities is conventional safety, including the management of chemically toxic materials and the engineering safety. Both aspects are not part of the IAEA mandate. They will be addressed in this workshop, but not to the same level of detail as the radiological aspects of decommissioning.

Monday, 16 October 2006

0900 – 0915 Welcoming Address

Welcome by the host organization and IAEA. Provide overview of the workshop.

0915 – 1015 Regulatory Requirements (E. Warnecke)

Discuss the requirements that should be in place to support decommissioning activities. Discuss responsibilities of the various parties involved with decommissioning nuclear facilities. Describe the difference between the various types of IAEA documents. Review the various IAEA documents that are available or being developed concerning decommissioning and related subjects.

1015 – 1045 Break

1045 – 1145 Decommissioning Process (L. Boing, USA)

Discuss the overall decommissioning process to include the various phases. Define specific decommissioning terms. Review the importance of the transition phase. Discuss the difference between decommissioning, shutdown, and transition activities. Review various decommissioning strategies and alternatives that are available for consideration and the benefits and disadvantages of each strategy. Discuss the difference between a programme and a project.

1145 - 1245 Decommissioning Planning (D. Draper, USA)

Discuss the decommissioning planning process. Discuss the key points in the planning process. Understand the importance of early planning. Describe actions that should be performed during shutdown or the transition period which will assist decommissioning activities. Review the basic work breakdown structure system and provide an example.

1245 – 1330 Lunch

1330 Start of tour to reactor facility

Participants will tour the Philippine Research Reactor facility for familiarization.

Tuesday, 17 October 2006

0800 – 0930 Management of Decommissioning Projects (L. Boing)

Discuss the overall management of a decommissioning project. Discuss the components of a decommissioning organization and the importance of proper staff personnel. Review the training requirements for decommissioning personnel. Review the quality assurance requirements associated with a decommissioning project. Review the principles of a good project schedule.

0930 – 1030 Safety Related Documentation (D. Draper)

Describe the typical safety related documents that should be prepared to support the decommissioning process such as the decommissioning plan, the health and safety plan, waste management plan, etc. Provide details on development of these documents and the approval process.

1030 – 1100 Break

1100 – 1200 The Transition Phase (L. Boing)

Identify how this phase relates to operations and decommissioning. Describe typical activities that are performed during this phase and organizational modifications that are needed. Discuss operational concerns and social and economic issues.

1200 – 1300 Cost Estimate and Financial Mechanisms (P. McIntyre, IAEA)

Describe the cost estimating approach for decommissioning. Identify the key components of a cost estimate. Identify factors that have a major impact on decommissioning costs.

1300 – 1400 Lunch

1400 – 1530 Radiological Monitoring during Decommissioning (D. Draper)

Provide the goals of a monitoring programme. Discuss the different types of surveys that are required during the life of the decommissioning project (characterization, operational and final surveys). Explain the importance of a historical site survey. Review the purpose and components of a good characterization survey. Discuss the plans and reports associated with the characterization survey. Discuss methodology that should be used when designing and preparing for a characterization survey. Identify potential areas that should be characterized to ensure proper understanding of the potential magnitude of the decommissioning project. Discuss the importance of

environmental monitoring. Describe the importance of the final survey.

1530 – 1600 Break

1600 – 1730 Practical Exercise I (P. McIntyre)

This exercise period and those on succeeding days will, in the context of strategic decisions on site end state, enable the participants to develop the draft decommissioning plan for PRR-1 in terms of topics such as schedule, cost and materials management.

Wednesday, 18 October 2006

0800 – 0930 Decontamination Technologies (L. Boing)

Discuss the basic objectives of decontamination activities. Explain the factors that should be used when selecting a technique. Describe various decontamination techniques for metal and concrete and discuss the advantages and disadvantages of the techniques.

0930 – 1030 Health and Safety Concerns (E. Warnecke)

Discuss health and safety concerns associated with decommissioning activities. Understand the possible safety problems other than radiological.

1030 – 1100 Break

1100 – 1300 Member State Presentations (4)

Representatives from each Member State will make a 20 min presentation on the status of their research reactor and describe any decommissioning planning that has been performed.

1300 – 1400 Lunch

1400 – 1500 Recordkeeping (D. Draper)

Describe the components of a good record management system. Discuss document types and the hierarchy of documents. Explain what records should be kept and the need for proper storage and accessibility of the data. Discuss various record storage media and the advantages and disadvantages of each.

1500 – 1600 Member State Presentations (2)

Representatives from each Member State will make a 20 min presentation on the status of their research reactor and describe any decommissioning planning that has been performed.

1600 – 1630 Break

16.30 – 1800 Practical Exercise II (P. McIntyre)

Continued work on the development of the draft decommissioning plan.

Thursday, 19 October 2006

0800 – 0930 Dismantling Technologies (L. Boing)

Discuss the basic objectives of dismantling activities. Explain the factors that should be used when selecting a technique. Describe various decontamination techniques for metal and concrete and discuss the advantages and disadvantages of the techniques.

0930 – 1000 Break

1000 – 1200 Waste and Spent Fuel Management (D. Draper)

Describe the management of waste during decommissioning. Identify various waste streams that might be encountered during decommissioning. Explain the importance of having a good characterization of the waste and applicable management pathways identified for each category. Identify waste storage that may be implemented if permanent waste disposal facilities are not available.

1200 – 1300 Lunch

1300 – 1400 Release from Regulatory Control (E. Warnecke)

Discuss the concerns about removing material from regulatory control and placed into the public market. Understand the importance of establishing criteria for removal of control early in the planning process. Discuss IAEA guidance on this issue.

1400 – 1530 Member State Presentations (3)

Representatives from each Member State will make a 20 min presentation on the status of their research reactor and

describe any decommissioning planning that has been performed.

1530 – 1600 Break

1600 – 1730 Practical Exercise III (P. McIntyre)

Continued work on the development of the draft decommissioning plan.

Friday, 20 October 2006

0830 – 1030 Practical Exercise Presentations (P. McIntyre)

1030 – 1100 Break

1100 – 12.30 General Discussions and Conclusions (E. Warnecke)

1230 – 1300 Closing Address