IAEA Regional Workshop

Legal and Regulatory Aspects of Decommissioning of Research Reactors

26 – 30 June 2006

Manila, Philippines

Monday, 26 June 2006

09:00 – 09:45 Opening (A. Dela Rosa, B. Batandjieva)

Welcoming by the host organization and the IAEA. Provide an overview of the workshop

09:45 – 10:30 The Decommissioning Process (I. Lund)[1]

Discuss the overall decommissioning process to include the various phases. Define specific decommissioning terms. Review the importance of the transition phase and discuss the differences between the operational, shutdown, transition and decommissioning phases. Review the various decommissioning strategies and alternatives that are available for consideration and understand the benefits and disadvantages of each strategy.

10:30 – 10:45 Break

10:45 – 11:30 International Legal Instruments Relevant to Decommissioning of Research Reactors (C. Stoiber)

Present and discuss the types of international legal instruments, such as International Conventions (e.g. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, Additional Protocol), Codes of Conduct (e.g. Code of Conduct on Safety of Research Reactors), and bi- or multilateral agreements. The hierarchy and legal authority of these instruments, together with the countries responsibilities, advantages and benefits following from these instruments will be discussed. Emphasis will be put on the relation of the international and national legal instruments (law, regulations, etc).

11:30 – 12:15 IAEA Safety Standards Relevant to Decommissioning (B. Batandjieva)

Describe the difference between the various types of IAEA documents. Provide a review and update of the IAEA safety standards (requirements and guides) and supporting technical reports that are available or being developed concerning decommissioning and related subjects.

12:15 – 13:30 Lunch

---

[1] All presentations and proceedings will be collected on CDs and distributed to all participants after completion of the workshop.

13:30 – 14:15 Decommissioning Planning (I. Lund)

Discuss the decommissioning planning process. Discuss the key points in the planning process and understand the importance of early planning. Review a basic work break down structure and provide an example.

14:15 – 15:00 Elements of National Law and their Relevance to Decommissioning (C. Stoiber)

The main elements that need to be addressed in a national law and that are related to decommissioning of facilities (e.g. research reactors) will be presented and discussed – scope and objectives of the law; safety principles; responsibilities of operators, regulatory body and other competent authorities; mechanisms for authorisation, inspection; enforcement; involvement of interested parties in the planning, implementation and completion of decommissioning activities. Specific aspects related to the radiation, waste, nuclear and transport safety and the release of material and sites from regulatory control will also be covered, together with a link to a lower level documentation (e.g. regulations and guidance).

15:00 – 15:15 Break

15:15 – 17:30 Participant Presentations of the Legal Aspects Pertinent for their Country (Participants)

The participants from the region will present the main regulatory aspects that they face as challenges in decommissioning of research reactors. They are also encouraged to present areas of specific interest for Agency technical assistance or exchange knowledge experience or lessons learned.

Each country will have 10 minutes for presentation. The presentations and the country reports will be requested to be submitted to the Agency before 21 June 2006

Tuesday, 27 June 2006

09:00 – 09:45 Legal and Governmental Aspects – National Policies on Decommissioning and Waste Management (I. Lund)

The need for development and implementation of consistent and integrated strategies for decommissioning of facilities and safe management of different types of radioactive waste generated during this process will be presented and discuses. The importance of coordination of the site specific decommissioning plans with the national policies for spent fuel, low, intermediate and high level waste will be also discussed.

09:45 – 10:30 Regulatory System (C. Stoiber)

The approaches for regulation and specifically for authorisation, inspection and enforcement of decommissioning of research reactors will be presented and discussed. Specific attention will be paid to the phased authorisation vs a single authorisation for decommissioning; application of the graded

approach to regulation; regulation of transition period, decommissioning and site release; and specific safety aspects for authorisation of direct dismantling, deferred dismantling and entombment.

10:30 – 10:45 Break

10:45 – 11:30 Regulatory Requirements on Decommissioning (B. Batandjieva)

Discuss the requirements that should be in place to support the decommissioning process. Discuss the responsibilities of the various parties involved with the decommissioning of a research reactor. The specific safety requirements on decommissioning and their importance for safe decommissioning of research reactors will be presented in accordance with international recommendations, i.e. requirements related to the protection of public health and environment; responsibilities associated with the state, regulatory body, operator, contractors, etc.; selection of decommissioning strategies; decommissioning plans; management of decommissioning projects; funding; completion of decommissioning and release of material and sites from regulatory control.

11:30 – 12:15 Safety Related Documentation (B. Batandjieva)

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, the waste management plan, the characterization plan, etc. Provide details on the development of these documents and their approval process.

12:15 – 13:30 Lunch

13:30 – 17:30 Visit Research Reactor (departure and return to the hotel)

Tour the research reactor and the low-level waste storage facility.

Wednesday, 28 June 2006

09:00 – 09:45 Requirements and Provisions for the Release of Material from Regulatory Control (B. Batandjieva)

Discuss the concerns related to the removal of material from regulatory control during the decommissioning process. Understand the importance of establishing criteria for the removal of control early in the planning process. Discuss the IAEA guidance on this issue and describe how the criteria were established.

09:45 – 10:30 Requirements and Provisions for the Release of Sites from Regulatory Control (B. Batandjieva)

Discuss the concerns related to the removal of a site from regulatory control during the decommissioning process. Understand the importance of establishing criteria for the removal of control early in the planning process. Discuss the IAEA guidance on this issue and describe how the criteria were established.

10:30 – 10:45 Break

10:45 – 11:30 Financial Mechanisms and Resource Requirements (C. Stoiber)

Insufficient financial resources for decommissioning of research reactors cause the delay of selection of a decommissioning strategy or decommissioning of these facilities. For this reason the importance for the cost estimation of decommissioning of research reactors will be discussed and in particular the estimating process and main cost items. The mechanisms for collection and preservation of the necessary funds for safe regulation of transition from operation to decommissioning, decommissioning and site release from regulatory control will be addressed as well.

11:30 – 12:15 Practical Exercise (B. Batandjieva, C. Stoiber, I. Lund)

12:15 – 13:30 Lunch

13:30 – 17:30 Practical Exercise (All)

Participants will apply the knowledge they received during the lectures during a group exercise.

Participants will take part in a practical exercise based on a realistic research reactor, planned to be decommissioned. Several working groups will be established to represent the operator, regulatory body and a contracting company; that will need to identify the safety related aspects and documents that need to be prepared and submitted and reviewed by the regulatory body, in order to issue a license for decommissioning.

Thursday, 29 June 2006

09:00 – 09:45 Inspection of Decommissioning Activities and Review for Compliance, Non-Compliance, Suspension and Appeals (I. Lund)

The approaches for control and inspection of authorised decommissioning activities will be presented with focus on identification of most important safety related activities that require control through the transition period from operation to decommissioning, during decommissioning and site release from regulatory control.

Specific safety aspects for inspection during direct dismantling, deferred dismantling and entombment will be also discussed.

The regulatory approaches for ensuring safety in case on non-compliance with regulatory criteria or conditions of the licences will be also presented focusing on the differences between operational and decommissioning phase of the research reactors.

09:45 – 10:30 Interface between Operator, Contractors the Public (I. Lund)

The importance of regular interface between operators and regulatory body will be presented. The need for such communication during regulation in the transition, decommissioning and site release periods will be explained for the three main types of decommissioning options (direct dismantling, deferred dismantling and entombment). Specific examples from the regulation of decommissioning of research reactors and other facilities will be presented and discussed.

10:30 – 10:45 Break

10:45 – 11:30 Management of Decommissioning Projects (B. Batandjieva)

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. Understand the importance of record keeping and maintaining proper and complete records. Review the quality assurance requirements associated with a decommissioning project. Review the principles of a good project schedule.

11:30 – 12:15 Evaluation and Demonstration of Safety During Decommissioning (B. Batandjieva)

The importance of a systematic identification of hazards during normal and accidental situations during decommissioning and their evaluation and comparison with safety requirements and criteria will be presented. Specific attention will be given to the key steps of the safety assessment methodologies that could be applied to safety assessment of research reactors.

12:15 – 13:30 Lunch

13:30 – 17:30 Practical Exercise (All)

Participants will apply the knowledge they received during the lectures during a group exercise.

Participants will take part in a practical exercise based on a realistic research reactor, planned to be decommissioned. Several working groups will be established to represent the operator, regulatory body and a contracting company; that will need to identify the safety related aspects and documents that need to be prepared and submitted and reviewed by the regulatory body, in order to issue a license for decommissioning.

Friday, 30 June 2006

09:00 – 11:30 Presentation and Discussion of Results of the Practical Exercise (Participants)

Each working group will present the results from the practical sessions. The presentations will be followed by discussion between all participants.

11:30 – 12:00 Closing (A. Dela Rosa, B. Batandjieva)