

Feedback Analysis Report

On

Revision to the Safety Requirements, “Decommissioning of Facilities Using Radioactive Material” (WS-R-5)

I. BACKGROUND:

The current version of the Safety Requirements, “Decommissioning of Facilities Using Radioactive Material” (WS-R-5), was published in 2006. The Safety Requirements cover the protection of workers, the public and the environment; responsibilities of the major parties associated with decommissioning; developing a decommissioning strategy and the resulting decommissioning plan; decommissioning funding; managing of decommissioning; conduct or implementation of decommissioning activities; and determination of when decommissioning has been completed, including surveys to support the termination of decommissioning activities. WS-R-5 was the first Safety Requirements for decommissioning published as a “stand alone” document.

IAEA procedures prescribe a review cycle of 10 years for Safety Requirements. The Chairman of WASSC requested the Secretariat to begin an early review of the Safety Requirements related to decommissioning and termination of activities to determine whether they would need to be revised.

This feedback report has been prepared to assist in determining whether to revise WS-R-5. The affected sections of WS-R-5, the alternative approaches to revising WS-R-5 and the recommended next steps from the IAEA Secretariat are described herein.

2. ISSUE AND BASIS FOR CHANGES:

In 2005, the Secretariat began revising three related decommissioning safety guides, (i.e., Decommissioning of Nuclear Power Reactors and Research Reactors (WS-G-2.1), Decommissioning of Medical, Industrial and Research Facilities (WS-G-2.2); Decommissioning of Fuel Cycle Facilities (WS-G-2.4)) for various reasons including the need to be consistent with WS-R-5 which was published in 2006. During the consultancy meetings to revise these safety guides, consultants identified areas where the Safety Requirements could be improved.

Members of the Safety Standards Committees have also provided feedback on WS-G-2.1, WS-G-2.2, and WS-G-2.4 which are related to the Safety Requirements. In November 2009, representatives of WASSC provided feedback in the Topical Session, “Discussion and Feedback on Decommissioning Safety Guides.” Also, the members of WASSC/NUSSC provided comments on the initial drafts of WS-G-2.1 and WS-G-2.4 which could be best considered and resolved during the revision of WS-R-5.

In addition, since WS-R-5 was published, additional experience has been gained from decommissioning activities around the world and from the application of the IAEA Safety Standards related to decommissioning. The experience of regulators and operating organizations has been presented and broadly discussed at different venues, including the Conference on Lessons Learned from the Decommissioning of Nuclear Facilities and the Safe Termination of Nuclear Activities, held in Greece in December 2006. Other international decommissioning guidance documents such as the Western European Nuclear Regulators’

Association safety reference levels, which are based on the IAEA Safety Standards, have been published. In addition, there have been additional complementary IAEA Safety Standards which were developed since the publication of the decommissioning Safety Requirements (e.g., Safety Requirements for Predisposal and Disposal Management of Radioactive Waste and for Management Systems and the Basic Safety Standards).

Based on the IAEA “Strategies and Processes for the Establishment of IAEA Safety Standards (SPESS),” WS-R-5 could be revised to be consistent with the new format for Safety Requirements. Also consistent with guidance in the SPESS, WS-R-5 could be revised in parallel with the revision of the implementing safety guides (which are undergoing revisions currently), which would streamline and improve the efficiency of the revision process for the set of decommissioning Safety Standards.

3. AFFECTED SECTIONS OF THE SAFETY STANDARDS

Based on lesson learnt in decommissioning, current existing decommissioning guidance and feedback from Member States, if the revision of WS-R-5 was approved, the entire Safety Requirements would be impacted. Various sections of the current Safety Requirements would need to be revised to further elaborate on the:

- revised IAEA Safety Standards, such as the revised Basic Safety Standards and Management System requirements;
- selection of a decommissioning strategy and preferences between the three strategies (e.g., if deferred dismantling is chosen, a detailed justification should be provided),
- timing of preparing and submitting the decommissioning related documents during the lifecycle of a facility;
- decommissioning preparatory tasks to be performed during the transition phase between operations and decommissioning;
- graded approach to decommissioning during a facility lifecycle and not only to decommissioning plan;
- completing decommissioning (e.g., preparing the final decommissioning reporting documents); and
- new format for the Safety Requirements.

4. IDENTIFICATION AND ANALYSIS OF ALTERNATIVE APPROACHES:

This preliminary analysis presents the alternatives that the IAEA Secretariat considered to address the feedback just described. Option 1 would be not to update WS-R-5 within the 10 year period, following its publication. Option 2 would be to update WS-R-5 based on the reasons identified above including feedback from Member States and experts in the field of decommissioning and alignment with the new format for the Safety Requirements.

While Option 2 would involve additional efforts and resources, these new Safety Requirements would describe the overarching and associated requirements that must be satisfied during the planning and implementation of decommissioning for the termination of practices and for the unrestricted or restricted release of facilities.

5. RESOURCES IMPACTED:

At least two consultancy meetings and possibly one technical meeting would be necessary to draft the revised Safety Requirements. It is anticipated that the revised document would be issued in parallel with complementary decommissioning safety guides.

6. RECOMMENDATIONS:

The IAEA Secretariat recommends WS-R-5 should be revised.