Waste Safety Standards Committee

37th Meeting
23-27 June 2014

Agenda Item W12.5

DS452 - Draft Safety Guide:
Decommissioning of Nuclear Installations
(for information)

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Purpose of the presentation

- Information on
  - Progress in drafting and the current status of DS452
- Plan for completion
Safety Standards for decommissioning (2014)

DS452
1999

1999

2001

1999

DS403

2004

2006

2008

GSR Part 6 (DS450)

Revision completed

Under revision

IAEA
Background

- In 2007 the CSS approved the DPPs for DS402 (NPP&RR), DS403 (MIRF) and DS404 (NFCF) as updates of the three facility specific decommissioning Safety Guides published in 1999 and 2001.
- In 2008-2010 the Secretariat held several consultancies to revise these documents.
- DS402 and DS404 were sent out separately for comments from WASSC and NUSSC.
- In June 2010, based on feedback from WASSC and NUSSC, a decision was made to retain DS403 (MIR facilities) as a separate guide, and to combine DS402 (NPP&RR) and DS404 (NFCF) into a single Safety Guide, DS452.
- A DPP for DS452 was approved at the CSS29 meeting, May 2011 (together with the DPP for DS450 – revision of SR WS-R-5).
- From June 2011 to June 2013 focus was on DS450.
Activities on DS452

- TM 30 January – 1 February 2012 (focus on DS450)
- 3 CS meetings on DS452
  - 27-31 August 2012
  - 2-6 September 2013
  - 31 March – 4 April 2014
- Next CS 14-18 July 2014 – to produce final draft for WASSC38
Challenges with DS452

• Needs to accommodate widely varying site configuration, safety, technological and radiological conditions:
  • Fuel cycle facilities, research reactors, power reactors
  • Single facilities vs. large scale multi-facility sites
  • Different decommissioning strategies
  • Criticality concerns for some fuel cycle facilities
  • Type and extent of contamination in and around facilities
    • Activation products, alpha contamination, airborne or ground water contamination
  • Aspects of decommissioning after accident (?)
Input considered

Main input:
- Draft DS450 / finalized and approved DS450
- MS practices and experiences

but also:
- Outcomes of the International FaSa project (safety assessment for decommissioning, multi-phase approach)
- IAEA EC EB project on Model Regulations for Decommissioning
- IEM on Decommissioning and Remediation after a Nuclear Accident, 28 January – 1 February 2013, Vienna
- CS meetings on Regulatory Aspects and Practical Experiences in Application of Entombment
Work done during the three CS meetings in 2012-2014

• Starting point:
  • “mechanical combination” (but not logical) of two separate documents (DS402 and DS404)
  • with two sets of comments
  • structure that followed WS-R-5
  • with many repetitions (similar guidance from DS402 and DS404)
  • unbalanced level of details

• Initial collective review of the draft
• Restructuring, deleting duplications, identifying gaps
• Reviewing comments to DS402 and DS404, as well as comments from the TM 2012
• Work in several subgroups on different chapters
Work done during the three CS meetings in 2012-2014

- Key issues discussed / input provided on:
  - decommissioning strategies (entombment downgraded to an option)
  - decommissioning planning
  - safety assessment in different stages of DP preparation
  - physical characterization (asset description)
  - financial provisions – assurance, mechanism
  - “phased” decommissioning
  - options for “end-state”
  - defence in depth in context of decommissioning
  - decommissioning of buildings associated to the mines or disposals to be closed
  - involvement of interested parties in the review of the final DP
  - transition
Work done during the three CS meetings in 2012-2014

• Key issues discussed / input provided on:
  • scope of POCO and what remains for decommissioning
  • review of strategy in case of unplanned shutdown
  • change of the end-state
  • waste stored on site after completion of decommissioning
  • final decommissioning report (content, level of details, graded approach)
  • retention of records after termination of license
  • partial decommissioning followed by a partial site release, gradual (progressive) site release during conduct

• Input completed ~95%, 80 pages
Structure of the current draft

New structure follows the structure of the revised DS450:

1. Introduction
2. Protection of People and Protection of the Environment
3. Responsibilities Associated with Decommissioning
4. Management of Decommissioning
5. Decommissioning Strategy
6. Financing of Decommissioning
7. Planning of Decommissioning during the Lifetime of the Facility
8. Conduct of Decommissioning Actions
9. Completion of Decommissioning Actions and Termination of Authorization for Decommissioning
   • Appendix I: Example of the General Content of a Final Decommissioning Plan and Supporting Documents
   • Appendix II: Example of the Contents of the Final Radiological Survey Report
   • Appendix III: Example of the Contents of the Final Decommissioning Report
   • Annex 1: Factors Influencing the Selection of a Decommissioning Strategy
   • Annex 2: Considerations for Safety Assessment during Decommissioning of Nuclear Facilities
Remaining work for the next CS

- Check the terminology
  - Authorization or license (license does have more sense for large facilities)
  - Need to define “decommissioning project”? 
  - Consistent use – example “national regulations”, “national legal framework”, “national requirements”
- Review how decommissioning after accidents is addressed
- Explain use of decommissioning funding for pre-decommissioning actions
- Discuss how personnel training and change of operational mind-set is addressed
- Address cross-contamination issue (in Conduct chapter)
- Discuss the practical dimension of the guide – need for more practical examples, lessons learned from experiences, possible different options to do the things and to meet specific requirement?
- Discuss the content and the order of Appendices
- Editorial work – numbering, references
- Final collective review, polishing the text
Plan for completion

• To be finalized during the next CS 14-18 July

• Final draft to be submitted to WASSC38 for comments and approval for submission to the MS
THANK YOU FOR YOUR ATTENTION!