IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Commission on Safety Standards
55th Meeting
28 to 30 May 2024

Agenda Item 3.5
Waste Safety Standards Committee
End of Term Report (2021-2023)

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Waste and Environmental Safety Section, NSRW

9th term of WASSC

Membership: 59 MS and 7 IOs

Meetings:

- Virtual
- Hybrid
- In-person with live-stream

	Meeting	Joint meetings with SSCs during the WASSC regular meeting
1.	WASSC-51	
2.	EPReSC / WASSC	
3.	WASSC-52	RASSC
4.	WASSC-53	TRANSSC
5.	WASSC-54	RASSC
6.	WASSC-55	
7.	EPReSC / WASSC	
8.	WASSC-56	

Drafts reviewed during the 9th term

Review of the DPP for submission to CSS (Step 3 of SPESS B)	• **23** DPPs for SS approved • **2** DPPs for NSG cleared
Review of the draft for submission to Member States (Step 7 of SPESS B)	• **10** draft safety standards approved
Review of the draft for submission to CSS (Step 11 of SPESS B)	• **21** draft safety standards approved

WASSC-led Safety Standards in preparation

New SS

DS526
IAEA Safety Standards for protecting people and the environment
National Policies and Strategies for the Safety of Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation
(Draft preparation, Step 5)

DS538
IAEA Safety Standards for protecting people and the environment
Long Term Post-Remediation Management of Areas Affected by Past Activities or Events
(Draft preparation, Step 5)

DS551
IAEA Safety Standards for protecting people and the environment
Decommissioning of Uranium Production Facilities
(DPP review by CSS, Step 5)

Published in 2024

SSG-1 (Rev.1)
Borehole Disposal Facilities for Disused Sealed Radioactive Sources

Update of SS

DS548
IAEA Safety Standards for protecting people and the environment
Predisposal Management of Radioactive Waste
Revision of GSR-5 (DPP review by CSS, Step 5)

DS550
IAEA Safety Standards for protecting people and the environment
Storage of Radioactive Waste
Revision of WS-G-6.1 (DPP review by CSS, Step 5)

DS553
IAEA Safety Standards for protecting people and the environment
Safety Case and Safety Assessment for the Predisposal Management of Radioactive Waste
Revision of GSG-3 (DPP review by SSC, Step 4)

DS542
IAEA Safety Standards for protecting people and the environment
Release of Sites from Regulatory Control on Termination of Activities in Planned Exposure Situation
Revision of WS-G-5.1 (Draft preparation, Step 5)

DS505
IAEA Safety Standards for protecting people and the environment
Radiological Monitoring for Protection of the Public and the Environment
Revision of RS-G-1.8 (First review by SSC, Step 8)

Requests from CSS & CSS Strategic Working Group

- The gap analysis for IAEA safety standards against COVID-19 pandemic
  - WASSC position statement – Appendix IV of the EoT report
- The implications of activities related to innovative and small modular reactor technologies on IAEA waste safety standards
  - WASSC feedback – Appendix V of the EoT report
- Concept paper for the long term structure and plan for the safety standards
  - WASSC survey results on the concept paper, including environmental scanning – Annex III of the WASSC-54 meeting report
- Medium term plan for the review and revision of waste safety standards
  - Final list is reproduced in the Appendix VI of the EoT report

Environmental Scanning for Long Term Plan

- Emerging technologies
  1. Generation of novel wastes concerns regarding treatment, storage and disposal options
  2. Novel spent fuel – potential issues long term stability, treatment, storage and disposal options
- Climate change
  1. Long term storage concerns
  2. Disposal issues particularly for near surface

For more details, see Annex III of the WASSC-54 meeting report

Topical sessions during the 9th term

WASSC continued its practice of discussing key topical issues of immediate relevance and interest to the Committee:

- Approaches for decommissioning strategies and lessons learned so far
  - ✓ presenters: Belgium, Canada, Finland, France, Georgia, Germany, Slovakia, Sweden, Switzerland, UK, USA
- New advanced technologies and potential impact on radioactive waste management
  - ✓ presenters: Canada, India, UK

Suggested priorities for the 10th term (2024-2026)

- Continue priorities from 9th term of WASSC
  - Continue activities initiated in 9th term
  - Further consideration of waste classification, derivation and application of waste acceptance criteria for predisposal management (including storage) and disposal
- Initiate revision of safety standards for disposal
  - Updating existing scope + additional aspects (e.g. operational safety of disposal facilities, boreholes for spent fuel/high activity wastes, effects of climate change on surface disposal, in situ disposal, ageing of disposal packages)
- Management of spent fuel and radioactive waste stored for extended periods
  - Ageing management, PSR, etc. for management facilities and for fuel/waste packages, safety of further management after extended storage, effects of climate change

Suggested priorities for the 10th term (2024-2026)

- Safe management for spent fuel and radioactive waste streams originating from the use of new technologies
  - New reactor designs and fuel cycles and new non-nuclear applications, effects on ownership/responsibility
- Applying safey standards, safety assessment and licensing for applying new technologies, e.g. in decommissioning and remediation, and other aspects of spent fuel and radioactive waste management
  - e.g. digital techniques, artifical intelligence, cybersecurity
- Sustainability in radioactive waste management, decommissioning and remediation
  - e.g. waste minimization, graded approach for different programmes (types, sizes), clearance, management of NORM residues and waste, engaging interested parties, climate change

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Thank you!