Agenda Item W5.1
– For information and discussion –

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Background

• There are many Requirements for MS to have Policies and Strategies (P&S) for nuclear safety and for waste management safety

• Currently, however, there is little guidance to support these Requirements that is specifically dedicated to waste safety

• Member States (MS) often request assistance and more detailed guidance on establishing P&S in the areas of radioactive waste and spent fuel management, decommissioning, and environmental remediation

• One of the first and main message we pass to MS is the need to develop and implement P&S for waste management. But, we don’t have corresponding guidance in the form of an internationally consensual publication as we do for all other aspects of waste safety
Review of Existing P&S Requirements

- There are many IAEA Requirements on Policy & Strategy
  - e.g. GSR Parts 1, 3, 5, 6, 7, SSR-5, SSR-6
  - next few slides give examples

- The Joint Convention also calls for reporting of national policy on radioactive waste and spent fuel management
  - There ought to be common understanding of what such policies and strategies should address
    - taking account of the widely different situations in MS
Key Requirements: High Level

GSR Part 1, Req. 1:

- “The government shall establish a national policy and strategy for safety,

- the implementation of which shall be subject to a graded approach in accordance with national circumstances and with the radiation risks associated with facilities and activities,

- to achieve the fundamental safety objective and to apply the fundamental safety principles established in the Safety Fundamentals.”
Key Requirements: Waste

GSR Part 3, Req. 10:

- The government shall make provision for:
  - the safe management and disposal of radioactive waste arising from facilities and activities,
  - and the safe management of spent fuel

“…essential elements of governmental policy and strategy”

GSR Part 5, Req. 2:

- The government shall ensure that a national policy and a strategy for radioactive waste management are established to ensure their effective management and control
Key Requirements: Decommissioning

GSR Part 1, Req 10:
• “2.28. Decommissioning of facilities and the safe management and disposal of radioactive waste shall constitute essential elements of governmental policy and the corresponding strategy…”

GSR Part 6, Req 8:
• The licensee shall select a decommissioning strategy that will form the basis for the planning for decommissioning. The strategy shall be consistent with the national policy on the management of radioactive waste.
Key Requirements: Remediation

GSR Part 3, Req. 49:

- The government shall ensure that provision is made:
  - for identifying those persons or organizations responsible for areas with residual radioactive material;
  - for establishing and implementing remediation programmes and post-remediation control measures, if appropriate; and
  - for putting in place an appropriate strategy for radioactive waste management
Observations

• Requirements on P&S for waste management safety are distributed throughout several publications. Where is the general guidance to support these?
  – SSG-16 sits below GSR Part 1, but focuses on Actions for developing a NPP programme, & provides little detailed guidance on waste management safety
  – DS468 addresses P&S for remediation (including remediation preparedness) → we would need to coordinate with development of DS468

• There are strong logical links between the areas of Waste and Spent Fuel Management, Decommissioning, and Environmental Remediation → decommissioning and remediation create waste that has to be managed

• National policy and strategy should be comprehensive
  – All materials & wastes, and disposals & discharges should be addressed

• Interdependencies need to be taken into account
Why do we need more guidance?

MS status RASIMS TSA4

- The RASIMs maps for TSA4, which covers RWM, D&ER shows just a few MS in green, and many MSs are still red

- This shows that safety infrastructure for RWM, D&ER is often poorly developed

- If this is not improved, it will create new legacy issues and pose potential risks to human health and the environment

- It may also reinforce a very negative image in the public’s mind of development of nuclear energy and application of nuclear technology
Examples where further guidance would help:

- How to apply the graded approach in defining P&S
- How to prioritize amongst development of new facilities, waste management, decommissioning, and remediation of existing facilities
- How to consider & balance:
  - Radioactive and non-radioactive impacts
  - Short-term versus long-term commitments and liabilities
  - Local versus regional or centralized facilities (e.g. storage or disposal facilities)
- Government versus operator-based financial assurance
- How to consider waste prevention in P&S
  - Control of waste generation and avoidance of legacy issues
- How to decide on when to move from storage to disposal
- How to consider options for residues (instead of treating them as waste)
- How (and how not to) document & implement policy (IRRS observations)
- How to deal with changes in policy
Other IAEA Reports

- Three relevant NE Series publications:
  - NW-G-1.1 on P&S for waste management from 2009
  - NW-G-1.2 on P&S for decommissioning from 2011
  - NW-G-1.3 on P&S for remediation from 2015

- Largely focused on technical options for different wastes, rather than safety, and give little guidance to MS on how to meet the relevant requirements
  - Not in the form of a series of ‘should statements’
  - More often in the form ‘…some countries do this, others do that…’

- Do not refer to the current Safety Standards

- Have not been through the formal committee process to check consistency with the Safety Standards

→ Cannot be considered as international consensual publications
Interactions with MS on Policy & Strategy

• Peer reviews of national arrangements
  – WATRP, IRRS, ARTEMIS reviews in many countries

• Discussion during international meetings, e.g:
  – LLW – Montrouge, France, 2015
  – Policies and Strategies for DSRS Management – Vienna, 2017

• Training during national and other workshops & missions
Interactions with MS on Policy & Strategy

Observations:

• MS have very different starting points, needs, understanding, resources, and levels of organisational development

• MS often ask for more guidance on policy and strategy development and implementation
  
  – For example, “what would be an undue burden on future generations?”
  
  – Policy and strategy development are needed as an early step, but often take a long time – so the need to begin is ‘urgent’

• Important to address the right audiences and topics:
  
  – Should address regulators and operators, but also need to speak to policy makers & legal staff
  
  – Need to address high-level issues (e.g. leadership and management, education & training, economic and societal factors), not just technical aspects
Options Analysis

• Do nothing
  – not a solution to the perceived ‘gap’ in the safety standards series
  – would not respond to MS requests for more guidance
  – would not be not in line with the message we pass to MS that the development and implementation of P&S on radioactive waste management is the one of the first objectives

• Develop a new Safety Requirement
  – this could consolidate Requirements on P&S, but would cause duplication, and would not necessarily enable the provision of more detailed guidance

→ Develop a new Safety Guide
  – that allows guidance to be provided on aspects of SF-1 and the GSRs
  – we suggest one new Safety Guide (rather than three) because of the logical links between the three subject areas (and to minimize the number of new documents)
Conclusions

• It is essential for MS to have policies and strategies covering radioactive waste and spent fuel management, decommissioning, and environmental remediation

• Currently there are many IAEA Requirements on P&S, but only limited guidance on such P&S, and there is no Safety Guide

• Existing NE Series documents are technology focused, and are not linked to the current Safety Requirements

• A succinct Safety Guide on P&S for these three closely interlinked areas, aimed at the right audience, level and topics, would fill a ‘gap’ in the Safety Standards, would help MS, and would improve the basis for IAEA Review Services (e.g. IRRS, Artemis)
Suggestion to WASSC

Thank you!
Suggestion to WASSC

  – Possible Objective:
    • “to provide guidance on the development and implementation of national policies and strategies for radioactive waste management and disposal, decommissioning of nuclear and radiological facilities, and environmental remediation to meet the safety requirements”
  – Possible Scope to include:
    General aspects, Legal and regulatory aspects
    Discharges, Predisposal and Disposal
    Decommissioning, Remediation