

TASK GROUP 97

Application of the Commission's Recommendations for Surface and Near Surface Disposal of Solid Radioactive Waste

Mandate

To prepare a publication that describes and clarifies the application of the Commission's recommendations for the protection of the public and workers and the environment as applicable to surface and near surface disposal of radioactive waste.

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Timeline

2022 Q4

Draft approval for public consultation

2023 Q4

Public consultation completed

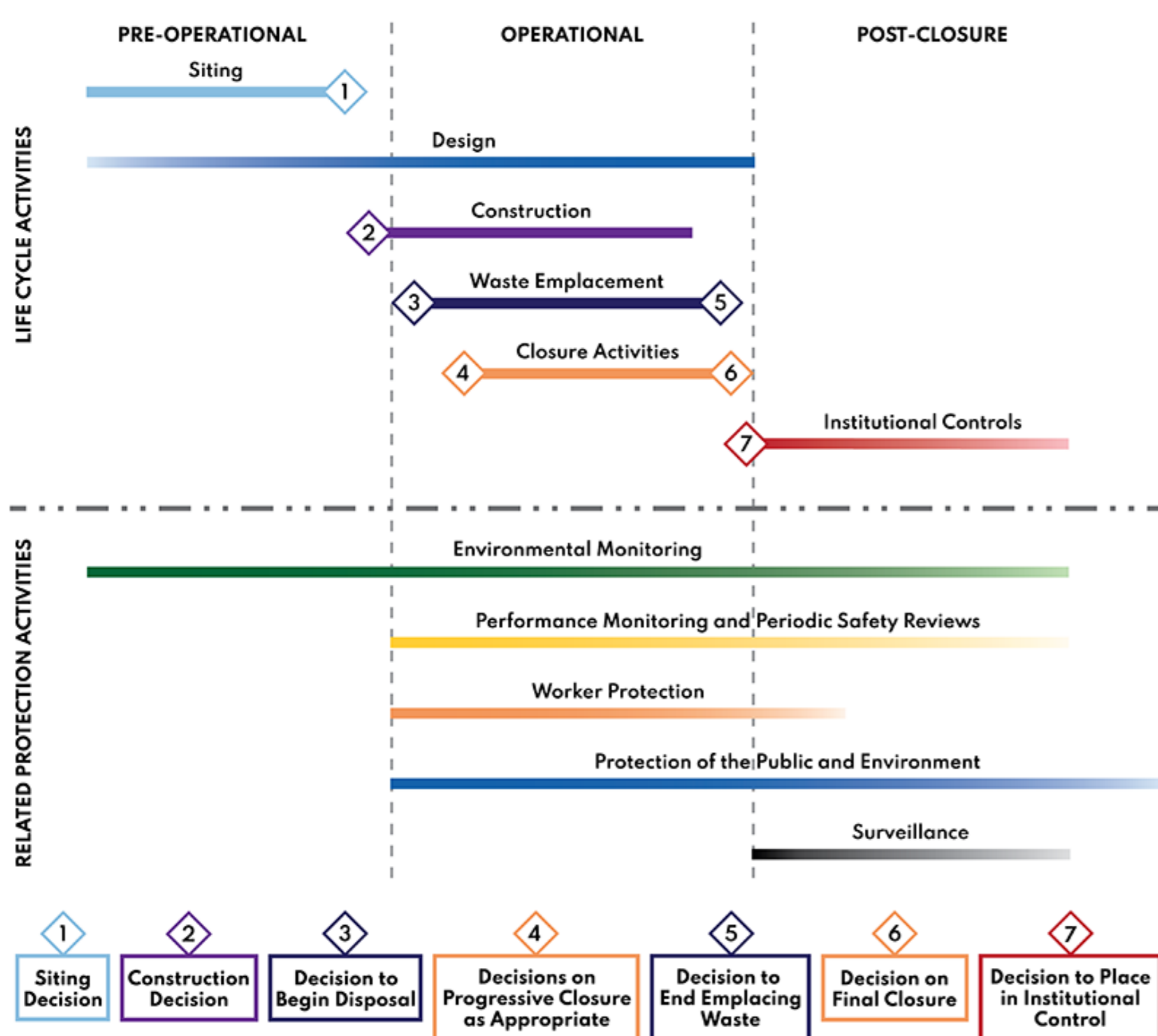
2023 Q3

Draft for approval for publication

Goals and Objectives

- Explore the application of the graded approach in implementing protection principles and advice in all facets of a facility's life cycle, based on hazard posed and degree of waste isolation
- Consult with regulators, implementers and relevant stakeholder's concerning the practical implementation of the Commission's recommendations
- Provide recommendations for how the fundamental radiation protection principles are to be applied over the life cycle of surface and near surface disposal including transition from planned exposure to existing exposure situation in the case of a loss of institutional control
- Develop report for publication in the Annals of the ICRP and materials for ICRPaedia

Life Cycle of Near Surface Disposal Facility



Example of surface-level nuclear waste disposal

Recommended Radiological Criteria and Objectives for Near-surface Disposal

Life-cycle Stage	Activity/Scenario	Protective Approach	Optimisation Criteria
Pre-operational; Operational; Transition to long-term institutional control	Site preparation; Design; Construction; Waste emplacement; Closure; Decommissioning of auxiliary facilities; final site configuration	Planned exposure situation, implementing: •Dose limits •Constraints (dose and risk) •Derived consideration reference levels (DCRL) •Best available techniques (BAT)	Optimisation as for the design and operation of any facility
	Expected evolution of facility and environment including reasonably foreseeable disruptive events		Optimisation guided by constraints of 0.3 mSv year ⁻¹ (dose); 10 ⁻⁵ year ⁻¹ (risk); and lower end of relevant DCRL
Post-closure; Institutional control and beyond	Severe disruptive events	Planning against framework for management of existing exposure situations:	Optimisation guided by reference levels ≤ 20 mSv and DCRLs
	Inadvertent human intrusion	•Reference levels •DCRL •BAT	
	Extreme events	Evaluation against possible consequences	Beyond design basis, not considered in optimisation