

# **External Advisors Meeting**

## **9 November 2023**

### **Information Sheet**

**Topic 2: Application of Graded Approach to  
Disposal of Radioactive Waste**

# Overview of Waste Management

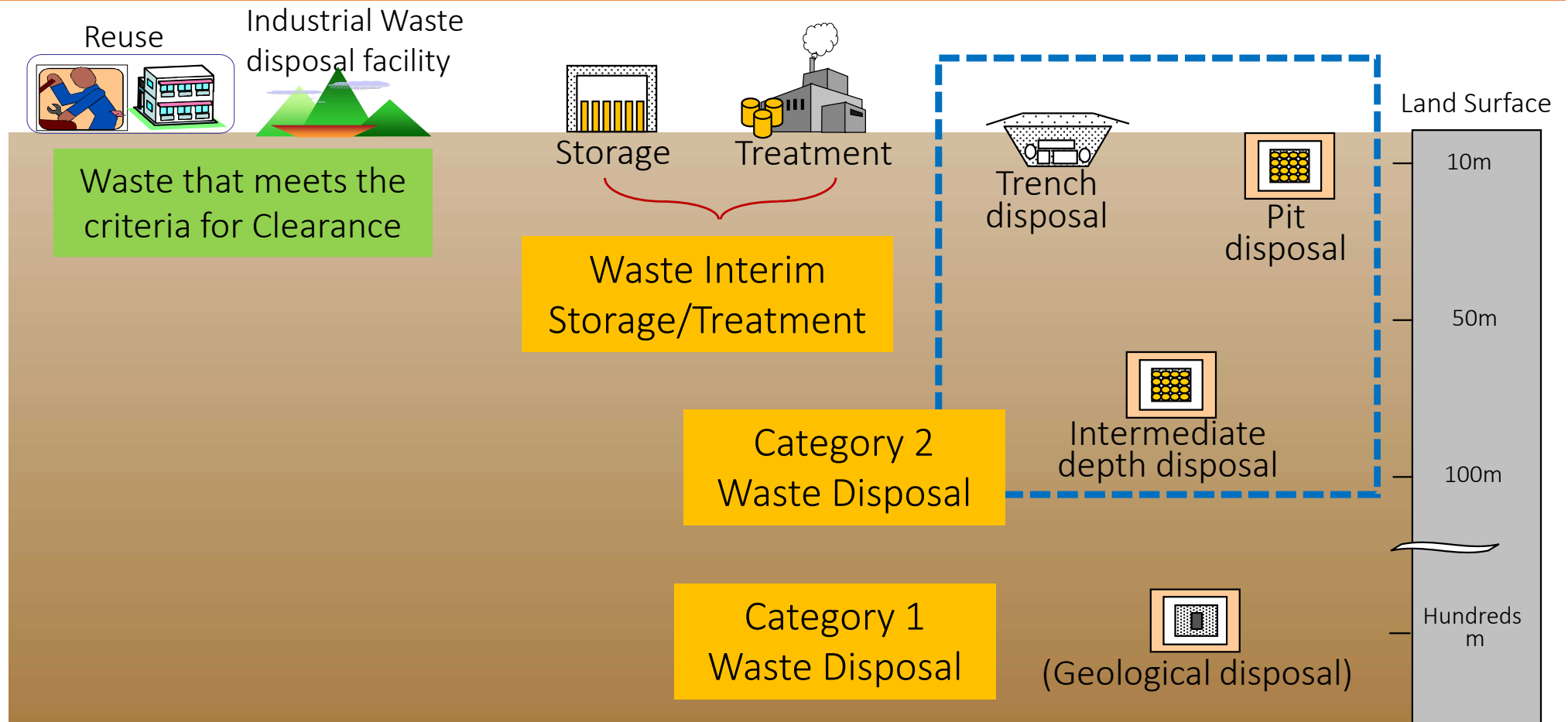


## Waste Disposal

Disposal of radioactive waste through the burial method are categorized as “Category 1” and “Category 2” according to the radioactive concentration of waste to be disposed of.

## Waste Interim Storage/Treatment

Storing radioactive waste outside of plants or processing radioactive waste into forms suitable for storage or final disposal until the commencement of final disposal facility through the burial method or other methods.



# Regulatory Documents for Radioactive Waste



The Reactor Regulation Act

## Current Status of Cat 2 Disposal Facility

JAEA	Ibaraki	Trench disposal facility	Post-closure Period
JAPC	Ibaraki	Trench disposal facility	Under Review of Permit of Business
JNFL	Aomori	Pit disposal facilities No. 1, 2 and 3	No. 1 and 2: in operation No. 3: Under Confirmation of Facility (Inspection)

The Cabinet Order for Enforcement of the Reactor Regulation Act  
(Rules of regulation for nuclear source material, nuclear fuel material and reactors)

NRA Ordinance for Cat-1 Business  
(Rules for Cat-1 Waste Disposal Business for Nuclear Materials or Objects Contaminated with Nuclear Fuel Materials)

NRA Ordinance for Cat-2 Business  
(Rules for Cat-2 Waste Disposal Business for Nuclear Fuel Material or Objects Contaminated with Nuclear Fuel Material)

NRA Ordinance for Permit of Cat-2 Business  
(Standards for the Location, Structure and Equipment for Cat-2 Waste Disposal Facilities)

Standards for the Review of Operational Safety Programs  
(Standards for the Review of Operational Safety Programs for Waste Disposal Facilities of cat-2 Waste Storage Business)

Interpretation of Standards for Permit of Cat-2 Business  
(Interpretation of the Location, Structure and Equipment for cat-2 Waste Disposal Facilities)

Review Guide for Cat-2 Waste Disposal Facilities  
(Regulatory Guide for Reviewing the Site of Cat-2 Waste Disposal)

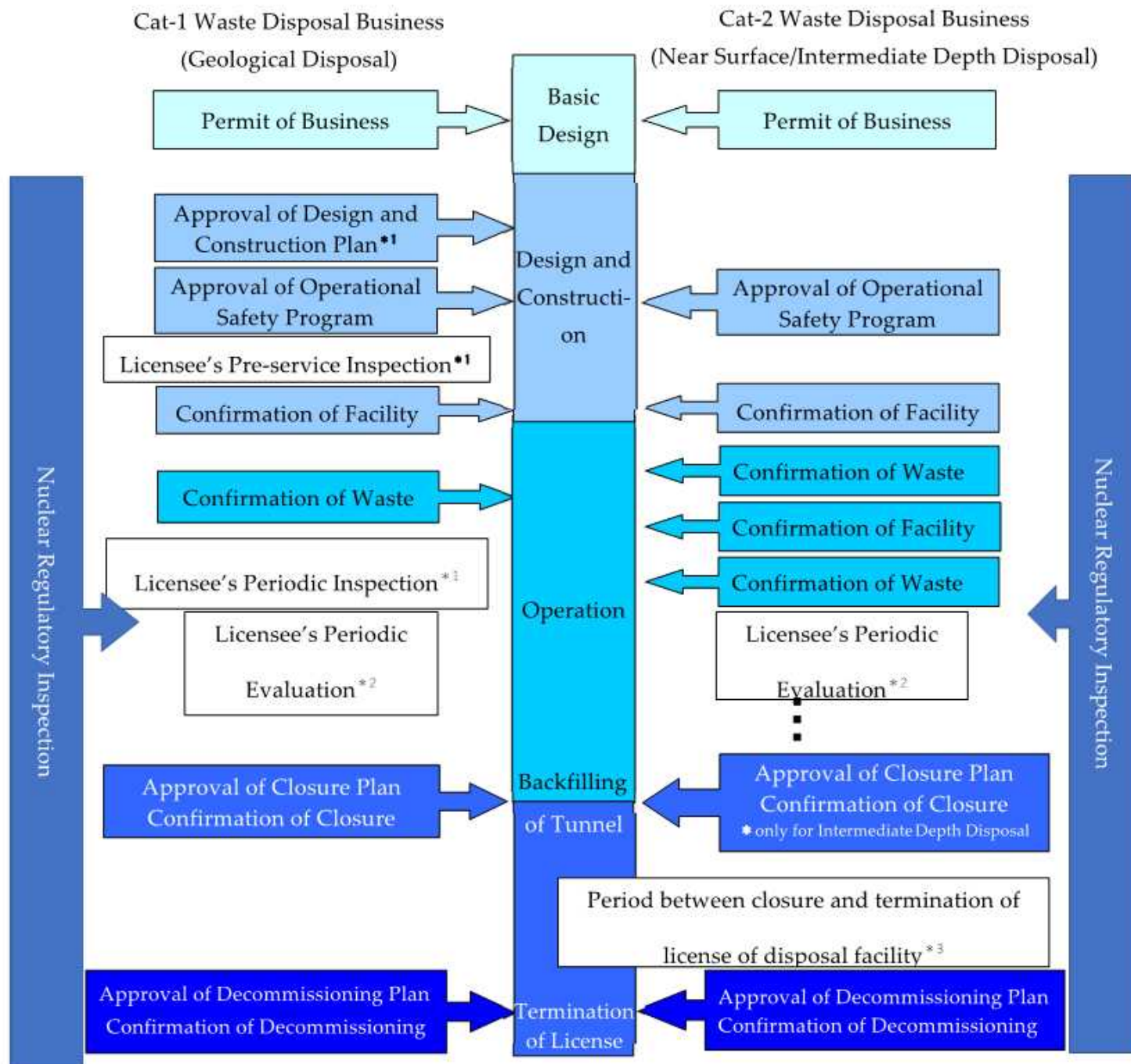
# Regulation on Waste Disposal Facility



	Cat-1 Waste Disposal	Cat-2 Waste Disposal		
		Intermediate-depth Disposal	Pit Disposal	Trench Disposal
<b>Permit of Business</b>	○		○	
<b>Approval of Design and Construction Plan</b>	○		×	
<b>Pre-service Inspection</b>	○		×	
<b>Confirmation of Facility</b>	○		○	

<b>Upper limit of radioactivity concentration for waste disposal</b>	C-14	(No upper limit)	10PBq/t	100GBq/t	
	Cl-36	(No upper limit)	10TBq/t		
	Co-60	(No upper limit)		1PBq/t	10GBq/t
	Ni-63	(No upper limit)		10TBq/t	
	Sr-90	(No upper limit)		10TBq/t	10MBq/t
	Tc-99	(No upper limit)	100TBq/t	1GBq/t	
	I-129	(No upper limit)	1TBq/t		
	Cs-137	(No upper limit)		100TBq/t	100MBq/t
	Alfa-emitting radionuclides	(No upper limit)	100GBq/t	10GBq/t	

# Safety Regulation Flow of Cat-1 Waste Disposal Business and Cat-2 Waste Disposal Business



- \* 1 : Only for Specified Cat-1 Waste Disposal Facility (ground facility such as reception facility for radioactive waste)
- \* 2 : Cat-1 Waste Disposal Business Periodically not exceeding 20 years after the approval, or at the time of formulation of Closure Plan and Decommissioning Plan  
Cat-2 Waste Disposal Business Evaluation of radiation exposure management due to nuclear fuel materials based on the latest technical knowledge and measures necessary for maintenance of waste disposal facility based on the evaluation result / periodically not exceeding 10 years after the start date of activity, at the time to change measures to be taken for operational safety in accordance with decay of radioactivity or to formulate Decommissioning Plan
- \* 3 : About 50 years after covering trench disposal site, 300-400 years after covering pit disposal site, 300-400 years for intermediate depth disposal after closure of tunnel (now under consideration)