

Waste Classification Schemes

Country: JAPAN

Reporting Year: 2004

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: No

Description: The Agency's standard matrix

Waste Class Name	Distribution %		
	LILW-SL	LILW-LL	HLW
LILW-SL	100.0	0.0	0.0
LILW-LL	0.0	100.0	0.0
HLW	0.0	0.0	100.0

Waste Class Matrix: **JP**

Description: The Atomic Energy Commission (AEC), in its Long-Term Program 2000, divided waste into two major categories: a) waste to be isolated (geological) disposal, and b) waste to be controlled disposal. The development of waste disposal concept and its safety regulations had however depended on earlier decisions by AEC on the basic policy for disposal of each waste category, which is based on what activity dose generated the waste. This JP waste matrix was used to provide information for the NEWMDB.

Waste Class Name	Distribution %		
	LILW-SL	LILW-LL	HLW
HLW	0.0	0.0	100.0
WcTRU	60.0	40.0	0.0
UW	97.0	3.0	0.0
WfPR	97.0	3.0	0.0
WfNA	97.0	3.0	0.0
RIW	98.0	2.0	0.0

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Comment # 9724: HLW

High Level Radioactive Waste (HLW) means the residual waste after the recovery of Pu/U and other useful materials from spent fuel by reprocessing. The high level liquid waste generated from reprocessing of spent fuels is immobilized in a glass matrix (vitrification) and stored for 30 to 50 years for cooling, and then will be disposed of in a stable geological formation deeper than 300 meters below.

The Specified Radioactive Waste Final Disposal Act was promulgated on June 2000, in which the relevant items such as establishment of implementing organization and site selecting process of final repository are provided.

Comment # 9725: LLW - Radioactive waste other than HLW

These are simply classified as Low Level Radioactive Waste (LLW), and categorized in to some groups according to their characteristics. Basic policy and safety guideline of waste disposal are examined for each group.

“WcTRU”: Waste containing Transuranic nuclides, generated from Reprocessing and MOX fuel fabrication.

“UW”: Uranium Waste, which is generated from uranium refining, conversion, enrichment and fuel fabrication. UW dose not includes depleted uranium (DU) from enrichment, or recovered uranium from reprocessing.

“WfPR”: Waste from Power Reactors (NPPs).

“WfNA”: Waste from Nuclear Applications, which is generated from research reactors and nuclear fuel material utilization facilities. This category obviously includes some waste corresponds to WcTRU and UW.

“RIW”: Radioisotope Waste, which is generated from radioisotope utilization facilities and various radiation generators.

Comment # 9726: Note: LLW Categories and Regulations

RIW is regulated by the “Law concerning Prevention from Radiation Hazards due to Radioisotopes, etc.” and/or medical-related legislation. Other waste categories are regulated by the “Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors”. There are some wastes categorized to both WfNA and RIW, those are dual-regulated waste generated in case that nuclear fuel materials and radioisotopes are used in a research facility, of which volume is included in WfNA.

RIW and WfNA have been considered to be burial disposed of at same repository. In this context, those wastes are often called “Waste from Medical, Industry and Research facilities (WfMIR)”.

Comment # 9908: Note: Percentages (%) to the IAEA classes

A common disposal-based waste scheme without dependence on nuclear activities is currently not available in Japan. For the NEWMDB submission, percentages (%) to the IAEA classes have identified only as FIRST ORDER APPROXIMATION, based on the prospective future waste generation (including decommissioning waste) and/or adoptable waste processing technology. Waste subjected to near surface disposal or clearance is assigned as IAEA LILW-SL class. Therefore, reported percentages will not be available for mutual comparing with IAEA and JP classification scheme at the inventory reporting date.

For a generated-based scheme, percentage values to IAEA class will essentially vary every year because radioactive waste dose not generated with keeping constant rate of disposal methods.

Comment # 9909: Note: Processed/Not-processed waste in Waste Data

In the “Waste Data” component, “processed” waste means conditioned waste packages that will be disposed. Else was included in “not-processed/unprocessed” waste (even though “unprocessed” means “as generated, neither treated nor conditioned” in the instruction of NEWMDB).

Although stored wastes may include volume-reduction-waiting (typically incineration, compaction, or decontamination) waste located in the storage facility, discrimination “as generated waste” from all inventory seems distant. Some waste is stored “as generated” (ex. Replaced Steam Generators of PWR, waste stored in spent fuel pool of NPP), waste volume will be reported when packaged for disposal.

Definition of «unprocessed waste» and «processed waste»:

Is not defined