



**Country Waste Profile Report for
MALAYSIA
Reporting Year: 2005**

*For guidance on reading Country Waste Profile Reports,
please refer to the following internet based document:*

<http://www-newmdb.iaea.org/help/profiles9/guide.pdf>

*For further information, please contact the Responsible Officer via e-mail:
NEWMDB@IAEA.org*

Waste Classification Schemes

Country: MALAYSIA

Reporting Year: 2005

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: Yes

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

Comment **# 387: use of the IAEA matrix**

Malaysia does not have an official classification of waste and waste class matrices. However, there is an NEWMDB provision which says that in the absence of national standards, Member States can use the Agency's standard as a reference. Malaysia is taking advantage of this provision for reporting to the NEWMDB.

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

This country uses the IAEA standard definition:

	as-generated waste	processed for handling	processed for storage	processed for disposal
Unprocessed means:	x			
Processed means:		x	x	x

Groups Overview

Country: MALAYSIA

Reporting Year: 2005

Reporting Group:	MINT
Inventory Reporting Date:	December 2005
Waste Matrix Used:	IAEA Def.
Description:	Malaysian Institute for Nuclear Technology Research

Site Name	Facility Name	Facilities Defined		
LTSF	EC1			disposal
	LTSF		storage	
MINT-RWMC	LLETP	processing		
	RWMC-SF		storage	

Attachment **#192: Reporting Group**

SRS.xls

SRS list - provided as an interim measure (SRS not categorized according to Agency SRS categories, plus Agency scheme under revision)

Site (Structure) : MINT-RWMC

Country: MALAYSIA

Reporting Year: 2005

Full Name: Malaysian Institute for Nuclear Technology Research - Radwaste Management Centre

Description:

Official Website:

License Holder(s): Unlicensed - MINT is responsible for the site

Waste management facilities that are located at this site:

Facility:	LLETP		
Description:	Low Level Effluent Treatment Plant, Block 31		
Processing part of facility	LLETP		
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	Yes	No	
LILW-LL	No	No	
HLW	No	No	
Type:	Treatment, Conditioning		
Year opened:	1984		

Site (Structure) : MINT-RWMC

Country: MALAYSIA

Reporting Year: 2005

Facility:	RWMC-SF
Description:	Radwaste Management Centre Storage Facility

Storage part of facility**RWMC-SF**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
LILW-SL	Yes	No
LILW-LL	No	No
HLW	No	No

List SRS?	No
List UMMT?	No

Capacity:	
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
Block 33	building	2002	No	No	No	Yes

Site (Data) : MINT-RWMC

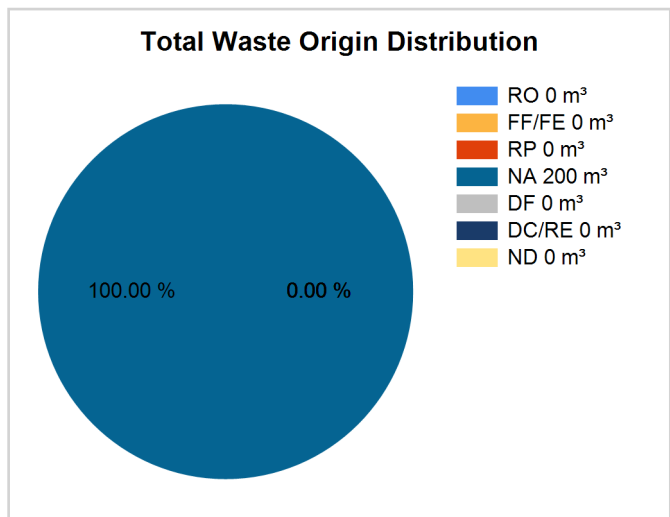
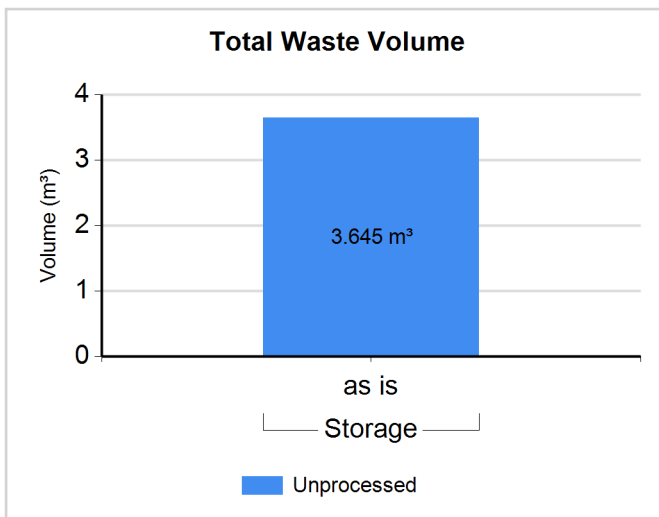
Stock of waste as at December 2005

Country: MALAYSIA

Reporting Year: 2005

Site Name: MINT-RWMC**Full Name:** Malaysian Institute for Nuclear Technology Research - Radwaste Management Centre**Inventory Reporting Date:** December 2005**Waste Matrix Used:** IAEA Def.**Waste Inventory**

Est=distribution is an estimate, Proc.=Is the waste processed (Yes/No)? RO=Reactor Operations, FF/FE=Fuel Fabrication/Fuel Enrichment, RP=Reprocessing, NA=Nuclear Applications,DF=Defence, DC/RE=Decommissioning/Remediation, ND=Not Determined



Note: where volume "as dispo" is provided, volume "as is" is used in the graph instead.

Waste Class: LILW-SL

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL (solid)	Storage / LLETP	N	N	0.025	0.025	0.00	0.00	0.00	100.00	0.00	0.00	0.00
LILW-SL (solid)	Storage / RWMC-SF	N	N	3.620	3.620	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation	N	N	Decrease	N
Compaction	N	N	Same	N

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation	N	N	Same	N

Regulators

Country: MALAYSIA

Reporting Year: 2005

Name:	AELB
Full Name:	Ministry of Science, Technology & Environment
Divison:	Atomic Energy Licensing Board
City or Town:	Dengkil, Selangor
Main Website:	

Name:	MoH
Full Name:	Ministry of Health
Divison:	Engineering Services Division
City or Town:	Kuala Lumpur
Main Website:	

Regulations / Laws

Country: MALAYSIA

Reporting Year: 2005

Name:	ACT304		
Title or Name:	Atomic Energy Licensing Act, 1984 or Act 304		
Reference Number:			
Date Promulgated or Proclaimed:	6/28/1984	Law	

Name:	Licensing		
Title or Name:	Radiation Protection (Licensing) Regulations 1986		
Reference Number:	P.U. (A) 149		
Date Promulgated or Proclaimed:	5/1/1986	Regulation	

Name:	BSS		
Title or Name:	Radiation Protection (Basic Safety Standards) Regulations 1988		
Reference Number:	P.U. (A) 61		
Date Promulgated or Proclaimed:	3/3/1988	Regulation	

Name:	Transport		
Title or Name:	Radiation Protection (Transport) Regulations 1989		
Reference Number:			
Date Promulgated or Proclaimed:	1/1/1989	Regulation	

Name:	Appeal		
Title or Name:	Atomic Energy Licensing (Appeal) Regulations 1990		
Reference Number:	LPTA (s): TAD/016/3; PN.(PU2)425		
Date Promulgated or Proclaimed:	6/13/1990	Law	

Name:	Lightning		
Title or Name:	Atomic Energy Licensing (Exemption) (Lightning Arrester) Order 1990		
Reference Number:	LPTA. (S) TAD/016/3; PN.(PU2)425/III		
Date Promulgated or Proclaimed:	1/2/1990	Regulation	

Regulations / Laws

Country: MALAYSIA

Reporting Year: 2005

Name:	Smoke	
Title or Name:	Atomic Energy Licensing (Exemption) (Smoke Detectors) Order 1989	
Reference Number:	LPTA.(S): TAD/016/1 Klt. 2; PN.(PU2) 425	
Date Promulgated or Proclaimed:	11/15/1989	Regulation

Name:	EEZ	
Title or Name:	Economic Exclusive Zone (Application of Atomic Energy Licensing Act 1984) Order	
Reference Number:	PM. (R) 11880/A/024/14; PN.(PU2) 428; P.U.(A) 175	
Date Promulgated or Proclaimed:	6/4/1990	Regulation

Name:	Ceramic	
Title or Name:	Atomic Energy Licensing (Exemption) (Ceramic Factory) Order 1998	
Reference Number:	P.U. (A) 431	
Date Promulgated or Proclaimed:	11/26/1998	Regulation

Name:	Amang	
Title or Name:	Atomic Energy Licensing (Exemption) (Small Amang Factory) Order 1994	
Reference Number:	P.U. (A) 435	
Date Promulgated or Proclaimed:	11/3/1994	Regulation

Name:	Low Activ	
Title or Name:	Atomic Energy Licensing (Exemption) (Low Activity Radioactive Material) Order 2002	
Reference Number:	P.U.(A) 182	
Date Promulgated or Proclaimed:	3/27/2002	Regulation

Name:	5 Kev	
Title or Name:	ATOMIC ENERGY LICENSING (EXEMPTION) (SCANNING ELECTRON MICROSCOPE) ORDER 1998	
Reference Number:	P.U. (A) 432	
Date Promulgated or Proclaimed:	10/26/1998	Regulation

Milestones

Country: MALAYSIA

Reporting Year: 2005

Start Year or Reference Year:	1976	End Year:	2000
Description of Milestone:			
<p>1968 - Radioactive Substances Act was established under the purview of Ministry of Health.</p> <p>1976 - The establishment of MINT (then was known as PUSPATI)</p> <p>1982- The TRIGA MARK II reactor reached criticality</p> <p>1984- The Radioactive Waste Management Centre started to operate; Facilities available were Low Level Effluent Treatment Plant and a Building comprising of Laboratory, Laundry, Intermediate level (Liquid and Solid) preparation Rooms and Decontamination facility and administrative office.</p> <p>1984 - Atomic Energy Licensing Act or Act 304 was established under the Ministry of Science, Technology and the Environment (MOSTE). Under this Act there are two regulatory authorities. The Ministry of Health for Medical Application practices, whereas the MOSTE regulates non-medical activities.</p> <p>1985 - the Atomic Energy Licensing Board (AELB) was established under the MOSTE to act as the regulatory authority.</p>			

Policies

Country: MALAYSIA

Reporting Year: 2005

National Systems

Policy		(Yes;Partially;No)
Q14	Has your Country implemented a national policy for radioactive waste management?	No
Strategies		(Yes;Partially;No)
Q15	Has your country developed strategies to implement a national policy?	Partially
Requirements		(Yes;Partially;No)
Q17	identified the parties involved in the different steps of radioactive waste management	Yes
Q18	specified a rational set of safety, radiological and environmental protection objectives	Yes
Q19	implemented a mechanism to identify existing and anticipated radioactive wastes	No
Q20	implemented controls over radioactive waste generation	Partially
Q21	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
Q22	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
Q23	implemented appropriate research and development to support the operational and regulatory needs	Partially
Q24	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
Q25	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially
Responsibilities		(Complete;Incomplete)
Q28	establish and implement a legal framework for the management of radioactive waste	Incomplete
Q29	establish or designate a regulatory body that has the responsibility for carrying out the regulatory function with regard to safety and the protection of human health and the environment.	Complete
Q30	define the responsibilities of waste generators and operators of waste management facilities	Complete
Q31	provide for adequate resources	Incomplete
Q33	enforce compliance with regulatory requirements	Incomplete
Q34	implement the licensing process	Incomplete
Q35	advise the government	Complete
Q37	identify an acceptable destination for the radioactive waste	Incomplete
Q114	comply with legal requirements	Incomplete

Policies

Country: MALAYSIA

Reporting Year: 2005

Activities		(Yes;Partially;No)
Q43	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
Q44	ensure adequate radiation protection for workers, the general public and the environment	Yes
Q45	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
Q46	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
Q47	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
Q48	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
Q49	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	No
Q50	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	No

Clearance		(Yes;No)
Q128	Does your country have "clearly defined clearance levels based on radiological criteria, with policy statements that material below those levels can be recycled or disposed of with non-radioactive wastes"?	Yes
Q129	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
Q130	Has your country ever used clearance levels to dispose of, reuse or recycle radioactive waste as non-radioactive waste or as a non-radioactive resource (excluding spent/disused sealed radioactive sources)?	Yes

Policies

Country: MALAYSIA

Reporting Year: 2005

Disposal Facilities

Licensing		(Yes - All;Yes - Some;No)
Q53	Environmental Assessment (EA)	Yes - All
Q54	Environmental Impact Statement (EIS)	Yes - All
Q55	Performance Assessment (PA)	Yes - All
Q56	Quality Assurance (QA)	Yes - All
Q57	Safety Assessment (SA)	Yes - All
Q59	If Quality Assurance is part of your Country's current, waste disposal facility licensing policy, does the QA Program conform to international standards (such as the ISO9000 series)?	Yes - All
Operation		(Yes - All;Yes - Some;No)
Q60	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No
Post-Closure		(Yes;No)
Q61	Does your Country have any written policies to address the maintenance of records that describe the design, location and inventory of waste disposal facilities?	Yes
Q62	If the answer to the previous question was YES, does your Country have any policies, laws or regulations that prescribe what records are to be maintained?	Yes
Q63	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
Q65	access restrictions	Yes
Q66	drainage and/or leachate collection system(s)	Yes
Q67	leachate treatment systems	Yes
Q68	environmental monitoring	Yes
Q69	facility monitoring	Yes
Q70	surveillance	Yes
Q71	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Policies

Country: MALAYSIA

Reporting Year: 2005

Processing/Storage

Policies/Procedures		(Yes;No)
Q73	waste sorting/segregation	Yes
Q74	waste minimization	Yes
Q75	waste storage	Yes
Q76	processing and/or storing and/or disposing of nuclear fuel cycle waste separately from non-nuclear fuel cycle waste (also known as nuclear applications waste)	No
Q78	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No
Implementation		(Yes;No)
Q80	In your Country are there any waste processing facilities at the same location where the waste is generated?	No
Q81	In your Country are there any centralized waste processing facilities?	Yes
Q82	In your Country are there any mobile waste processing facilities?	No
Foreign		(Yes;No)
Q121	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	No
Q124	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Policies

Country: MALAYSIA

Reporting Year: 2005

Spent/Disused SRS

Registration		(Yes;No)
Q84	Is there a national level registry?	Yes
Q85	If answer was yes, is the registry used only for disused/spent SRS?	No
Q87	Are there regional-level registries (one or more)?	No
Q90	Are there local-level registries (one or more)?	No
Procedures		(Yes;No)
Q91	Does your Country have documented procedures in place to ensure that sealed radioactive sources (SRS) are transferred to secure facilities in a timely manner after their user declares them to be spent?	Yes
Agreements		(Yes;No)
Q93	Government to Government agreements	No
Q94	Government - Supplier agreements	No
Q95	Supplier-User agreements	Yes
Q97	Do any agreements include suppliers that are outside of your Country?	Yes
Release / Disposal		(Yes;No)
Q99	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	Yes
Q100	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
Q101	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	No
Q102	Has your Country implemented dedicated disposal facilities for spent SRS?	No
Q103	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No
Import-Export		
Radioactive Waste		(Yes;No)
Q104	Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)?	Yes
Spent Fuel		(Yes;No)
Q105	Does your Country have laws or Regulations restricting either the import or export of spent fuel?	Yes

Country: MALAYSIA

Reporting Year: 2005

Liquid HLW**Storage****(Yes;No)**

Q106 Does your Country have high-level liquid wastes in storage? No

UMMT**Responsibility****(Yes;No)**

Q110 Does your Country have any Uranium Mine and Mill Tailings sites that do not have a designated authority to manage them? No

Decommissioning**Funding****(Yes - All;Yes - Some;No)**

Q111 Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities? No

Facilities**(Yes;No)**

Q119 Does Your Country have any nuclear fuel cycle facilities? No

Q120 Does Your Country have any nuclear applications facilities (non fuel cycle facilities)? Yes

Timeframe**(Yes - All;Yes - Some;No)**

Q113 Does your Country require a time frame for the decommissioning of non-nuclear fuel cycle facilities once these facilities cease operation? No

Future Outlook

Country: MALAYSIA

Reporting Year: 2005

Data not available.

Future Outlook

Country: MALAYSIA

Reporting Year: 2005

Data not available.

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