



**Country Waste Profile Report for  
MALAYSIA  
Reporting Year: 2006**

*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: 2006

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 following definitions:

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

Comment **# 15119: Definitions for Unprocessed Waste and Processed W**

I agree with the definition that processed waste shall mean all necessary activities such as treatment or conditioning etc. of waste have been completed and the waste now is in its final form for disposal. Otherwise, we need the definition for 'interim' processed waste to cover processed waste prior to disposal.

Syed A. Malik, Malaysia

## Groups Overview

Country: MALAYSIA

Reporting Year: 2006

<b>Reporting Group:</b>	MINT
Inventory Reporting Date:	December 2006
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: 2006

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

Location: KAJANG

Description:

Official Website:

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

Waste management facilities that are located at this site:

<b>Facility:</b>	<b>LLETP</b>														
<b>Description:</b>	Low Level Effluent Treatment Plant, Block 31														
<p><b>Processing part of facility</b>                      <b>LLETP</b></p> <p>The following shows processing status for waste classes and SRS.</p> <table border="1"> <thead> <tr> <th>Waste Class</th> <th>Actual</th> <th>Planned</th> </tr> </thead> <tbody> <tr> <td>LILW-SL</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>LILW-LL</td> <td>No</td> <td>No</td> </tr> <tr> <td>HLW</td> <td>No</td> <td>No</td> </tr> </tbody> </table>				Waste Class	Actual	Planned	LILW-SL	Yes	No	LILW-LL	No	No	HLW	No	No
Waste Class	Actual	Planned													
LILW-SL	Yes	No													
LILW-LL	No	No													
HLW	No	No													
<b>Type:</b>	Treatment, Conditioning														
<b>Year opened:</b>	1984														

## Site (Structure) : MINT-RWMC

Country: MALAYSIA

Reporting Year: 2006

<b>Facility:</b>	<b>RWMC-SF</b>
<b>Description:</b>	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?	Yes
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

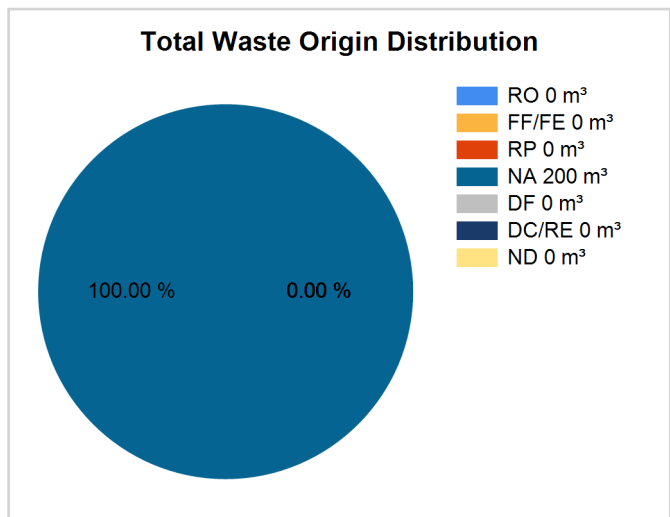
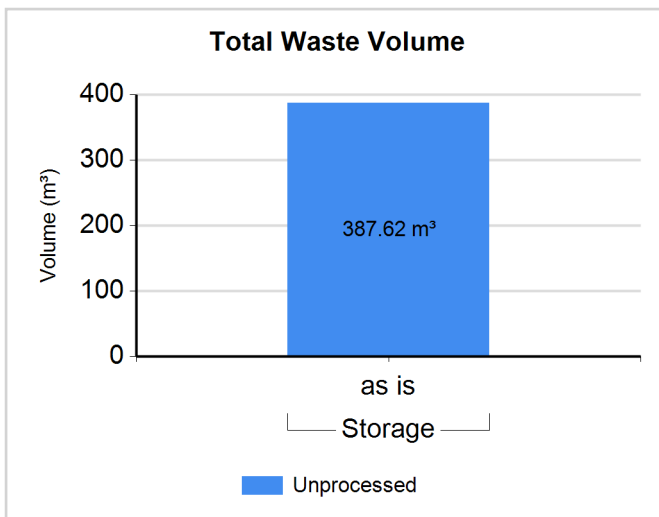
Stock of waste as at December 2006

Country: MALAYSIA

Reporting Year: 2006

**Site Name:** MINT-RWMC**Full Name:** Malaysian Institute for Nuclear Technology Research - Radwaste Management Centre**Inventory Reporting Date:** December 2006**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 (liquid)	Storage / LLETP	N	N	384.000	384.000	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

## Site (Data) : MINT-RWMC

Stock of waste as at December 2006

Country: MALAYSIA

Reporting Year: 2006

**Spent Sources <=30 years in Storage**

Nuclide	Number of Sources/Total Activity of Sources (GBq)			c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num/activity	num/activity	num/activity					
Cd-109	1			N	Y	N	1.900E-001	
	1.900E-001							
Cs-137	3			N	Y	N	4.300E+000	
	4.300E+000							
Fe-55	1			N	Y	N	1.700E+000	
	1.700E+000							
Kr-85		5		N	Y	N	6.000E+001	
		6.000E+001						
Sr-90	1			N	Y	N	1.900E+000	
	1.900E+000							

**Spent Sources > 30 years in Storage**

Nuclide	Number of Sources/Total Activity of Sources (GBq)		c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 2 GBq	Group II more than 2GBq					
	num/activity	num/activity					
Am-241	175		N	Y	N	3.500E+001	
	3.500E+001						
Ra-226	1		N	Y	N	1.900E+000	
	1.900E+000						

**Regulators**

Country: MALAYSIA

Reporting Year: 2006

<b>Name:</b>	<b>AELB</b>
Full Name:	Atomic Energy Licensing Board
Divison:	
City or Town:	Dengkil, Selangor
Main Website:	



## Regulations / Laws

Country: MALAYSIA

Reporting Year: 2006

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

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

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

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

<b>Name:</b>	<b>Appeal</b>	
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	Regulation

<b>Name:</b>	<b>Lightning</b>	
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: 2006

<b>Name:</b>	<b>Smoke</b>	
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

<b>Name:</b>	<b>EEZ</b>	
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

<b>Name:</b>	<b>Amang</b>	
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

<b>Name:</b>	<b>Low Activ</b>	
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

**Milestones**

Country: MALAYSIA

Reporting Year: 2006

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>			

## Future Outlook

Country: MALAYSIA

Reporting Year: 2006

**Data not available.**

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