



# **Country Waste Profile Report for MOROCCO 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](mailto:NEWMDB@IAEA.org)*

## Waste Classification Schemes

Country: MOROCCO

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 **# 12321: Waste Matrix IAEA Def.**

According to the regulation of radioactive waste management (not promulgated yet) radioactive waste are categorised as follow:

Depending on the half lived of the radionuclides:

1. Waste contaminated by radioisotopes, with a half-life below 61 days
2. Waste contaminated by radioisotopes, with a half-life between 61 days and 30 years
3. Waste contaminated by radioisotopes, with a half-life above 30 years

According to the physical and chemical characteristics:

- A: solid waste
- B: aqueous liquid waste
- C: organic waste
- D: mixture waste
- E: spent sealed sources
- F: biologic waste
- G: medical waste
- H: gaseous waste

According to activity levels:

1. Low level waste (<10MBq) contaminated by short lived (<61 days) management by decay at his origin of production and discharge after 10 period of decay
2. Low level waste contaminated by radioisotopes which have half-life below or equal to 30 years (alpha emitters are limited to 4000 Bq/g for each package)
3. Low and intermediate level waste which is contaminated by radioisotopes having a half-life above 30 years
4. High level waste (spent fuel for example)

Comment **# 12322: Waste Matrix IAEA Def.**

For the NEWMDB, the IAEA categorization was used. There are not HLW at present. The spent fuel will be stored in pool (capacity 300 elements) waiting to be returned to the supplier.

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

Is not defined

## Groups Overview

Country: MOROCCO

Reporting Year: 2005

<b>Reporting Group:</b>	IAEA-MRC			
Inventory Reporting Date:	December 2005			
Waste Matrix Used:	IAEA Def.			
Description:	This submission was prepared by the IAEA. The information was obtained from the Morocco National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention Report), 2005			
Site Name	Facility Name	Facilities Defined		
CENM	LTSF		storage	
	RWTF	processing		
Attachment <b>#1240: Reporting Group</b> morocco-national-report.pdf Morocco National Report to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention Report), 2005				

## Site (Structure) : CENM

Country: MOROCCO

Reporting Year: 2005

Full Name: Nuclear Research Centre Maamora

Location:

Description:

Official Website:

License Holder(s): Centre National de l'Energie, des Sciences et des Techniques Nucléaires (CNESTEN)

Comment # 12328: Site CENM

CNESTEN was created in 1986 by law. It is the organization responsible for the management of radioactive waste at national level

Comment # 12329: Site CENM

CNESTEN collects radioactive waste generated by its facilities and by the users of radioactive materials at the national level. It has the facilities for treatment of liquid effluents, compaction of solid waste and conditioning of disused sealed radioactive sources.

Waste management facilities that are located at this site:

<b>Facility:</b>	LTSF					
<b>Description:</b>	Long term storage facility					
<b>Storage part of facility</b>						
<b>LTSF</b>						
The following shows storage status for waste classes and SRS.						
<b>Waste Class</b>		<b>Actual</b>	<b>Planned</b>			
LILW-SL		No	No			
LILW-LL		No	No			
HLW		No	No			
<b>List SRS?</b>	Yes					
<b>List UMMT?</b>	No					
<b>Capacity:</b>	The storage facility covers an area of 188 m <sup>2</sup> , divided into 4 compartments of 612 drums capacity each					
<b>Types of Storage Units</b>						
<b>Storage Unit Name</b>	<b>Type Name</b>	<b>Year Opened</b>	<b>Closed?</b>	<b>Full?</b>	<b>Modular?</b>	<b>Contains SRS?</b>
Store	building	0	No	No	No	Yes
<b>Comment</b>	<b># 12330: Storage Facility LTFSF</b>					
No other inventories of radioactive wastes, except disused sealed radioactive sources, are reported in the JC report.						

## Site (Structure) : CENM

Country: MOROCCO

Reporting Year: 2005

<b>Facility:</b>	<b>RWTF</b>												
<b>Description:</b>	Radioactive Waste Treatment Facility												
<b>Processing part of facility</b> <b>RWTF</b>													
The following shows processing status for waste classes and SRS.													
<table border="1"><thead><tr><th>Waste Class</th><th>Actual</th><th>Planned</th></tr></thead><tbody><tr><td>LILW-SL</td><td>No</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	No	No	LILW-LL	No	No	HLW	No	No	
Waste Class	Actual	Planned											
LILW-SL	No	No											
LILW-LL	No	No											
HLW	No	No											
<b>Type:</b>	Treatment, Conditioning												
<b>Year opened:</b>	0												

**Site (Data) : CENM**

Stock of waste as at December 2005

Country: MOROCCO

Reporting Year: 2005

**Site Name: CENM**

Full Name: Nuclear Research Centre Maamora

Inventory Reporting Date: December 2005 Waste Matrix Used: IAEA Def.

Comment # 12328: Site CENM

CNESTEN was created in 1986 by law. It is the organization responsible for the management of radioactive waste at national level

Comment # 12329: Site CENM

CNESTEN collects radioactive waste generated by its facilities and by the users of radioactive materials at the national level. It has the facilities for treatment of liquid effluents, compaction of solid waste and conditioning of disused sealed radioactive sources.

**Processing - Treatment method(s)**

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

Comment # 12331: Waste Treatment on Site CENM

The status of treatment and conditioning methods is not reported in the JC report.

**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) : CENM

Stock of waste as at December 2005

Country: MOROCCO

Reporting Year: 2005

## Spent Sources &lt;=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					
Co-60	23			Y	N	N	1.430E+001	
	1.430E+001							
Cs-137	27	5		Y	N	N	1.174E+002	
	3.790E+001	7.950E+001						
Kr-85	3			Y	N	N	4.000E-002	
	4.000E-002							
Sr-90	2			Y	N	N	1.600E+000	
	1.600E+000							

Comment # 12332: SRS Spent Sources <=30 years in Storage Site CE

The number of Co-60 sources in the drum01 is unknown; these sources were not included in the report.  
Sources with unknown activities were not included in the report.  
All sources are reported as conditioned, but this information is not in the JC report

## Spent Sources &gt; 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	37		Y	N	N	4.200E+001	
	4.200E+001						
Am-241	18	2	Y	N	N	1.320E+002	
	2.100E+001	1.110E+002					
Ra-226	21		Y	N	N	1.760E+001	
	1.760E+001						
Ra-226	3	1	Y	N	N	4.200E+000	
	5.000E-001	3.700E+000					

Comment # 12333: SRS Spent Sources >30 years in Storage Site CEN

The number of Ra-226 sources must be updated. These are the Ra-226 sources contained in the drum02 and drum03.  
All sources are reported as conditioned, but this information is not in the JC report

**Site (Data) : CENM**

Stock of waste as at December 2005

Country: MOROCCO

Reporting Year: 2005



## Regulators

Country: MOROCCO

Reporting Year: 2005

<b>Name:</b>	<b>CNRP</b>
Full Name:	The National Centre for Radiation Protection
Divison:	
City or Town:	
Main Website:	

Comment # 12323: Regulator CNRP

The National Centre for Radiation Protection (CNRP) is under the Ministry of Health and regulates all activities taken place in no nuclear installations

<b>Name:</b>	<b>MEM</b>
Full Name:	The Ministry of Energy and Mine
Divison:	
City or Town:	
Main Website:	

Comment # 12324: Regulator MEM

The Ministry of Energy and Mine regulates nuclear installations

## Regulations / Laws

Country: MOROCCO

Reporting Year: 2005

<b>Name:</b>	<b>Law 71</b>		
Title or Name:			
Reference Number:			
Date Promulgated or Proclaimed:	1/1/2005	Law	

Comment # 12325: Regulation Law 71

The main law is the Law 71, and this law will be implemented by four decrees:

- One related to radiation protection (promulgated)
- One related to nuclear installation (promulgated)
- One dealing with radioactive waste management (is not promulgated)
- One decree on the transport (still a draft)

## Future Outlook

Country: MOROCCO

Reporting Year: 2005

**Data not available.**

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Reporting Year: 2005

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## Future Outlook

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## Future Outlook

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## Future Outlook

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