



Country Waste Profile Report for BELGIUM Reporting Year: 2013

*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: BELGIUM

Reporting Year: 2013

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: No

Description: The Agency's standard matrix

Waste Class Name	Distribution %			
	VLLW	LLW	ILW	HLW
VLLW	100.0	0.0	0.0	0.0
LLW	0.0	100.0	0.0	0.0
ILW	0.0	0.0	100.0	0.0
HLW	0.0	0.0	0.0	100.0

Waste Class Matrix: **NIRAS**

Yes

Description: This Matrix outlines the link between the classification scheme of conditioned radioactive waste, as developed by ONDRAF/NIRAS (the Belgian National Agency for Radioactive Waste and Enriched Fissile Materials) and the Agency's proposed scheme.

Waste Class Name	Distribution %			
	VLLW	LLW	ILW	HLW
Category A	0.0	100.0	0.0	0.0
Category B	0.0	0.0	100.0	0.0
Category C	0.0	0.0	85.9	14.1
Category R	0.0	100.0	0.0	0.0

Attachment **#1012: Waste Matrix**

IAEA NEWMDB WASTEMATRIX 17OCT05.doc

This document outlines the link between the classification scheme of conditioned radioactive waste, as developed by ONDRAF/NIRAS, and the Agency's proposed scheme.

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:	x			
Processed means:		x	x	x

Groups Overview

Country: BELGIUM

Reporting Year: 2013

Reporting Group:	FOREIGN
Inventory Reporting Date:	December 2013
Waste Matrix Used:	NIRAS
Description:	Belgian radioactive waste stored outside Belgium.

Site Name	Facility Name	Facilities Defined		
ForeignRP	AREVA	processing		
	UKAEA	processing		

Groups Overview

Country: BELGIUM

Reporting Year: 2013

Reporting Group:	NIRAS
Inventory Reporting Date:	December 2013
Waste Matrix Used:	NIRAS
Description:	<p>The Belgian National Agency for Radioactive Waste Management and Enriched Fissile Materials, NIRAS, manages all radioactive category A, B and C waste in Belgium and has an industrial branch, namely Belgoprocess, with 2 sites in Dessel, Belgium.</p> <p>Umicore is an industrial company which produced category R-waste.</p>

Site Name	Facility Name	Facilities Defined		
BP1	B103		storage	
	B104		storage	
	B110X	processing	storage	
	B127		storage	
	B129		storage	
	B136		storage	
	B150		storage	
	B151		storage	
	B153		storage	
	B155		storage	
	B156		storage	
	CILVA	processing		
	EUROBIT	processing		
	PAMELA	processing		
BP2	B270M		storage	
	B280X	processing		
	KWB/BRE	processing		
	MUMMIE	processing		
	PYROLYSIS	processing		
UMICORE	OPL		storage	

Groups Overview

Country: BELGIUM

Reporting Year: 2013

Reporting Group:	SEA_DUMP
Inventory Reporting Date:	December 2013
Waste Matrix Used:	NIRAS
Description:	This group reflects the inventory of Belgian radioactive waste disposals at sea, carried out during the period 1960-1982.

Site Name	Facility Name	Facilities Defined	
SEA_DUMP	SEA_DUMP		disposal

Reporting Group:	Total
Inventory Reporting Date:	December 2013
Waste Matrix Used:	NIRAS
Description:	

Site Name	Facility Name	Facilities Defined	
Total	NS		storage

Site (Structure) : ForeignRP

Country: BELGIUM

Reporting Year: 2013

Full Name: Foreign Reprocessing and Waste Treatment Plants

Description:

Official Website:

License Holder(s):

Waste management facilities that are located at this site:

Facility:	AREVA	
Description:	AREVA Group, (formerly Cogema), Cap de la Hague, France	
Processing part of facility AREVA		
The following shows processing status for waste classes and SRS.		
Waste Class	Actual	Planned
Category A	No	No
Category B	No	No
Category C	Yes	No
Category R	No	No
Type:	Conditioning	
Year opened:	0	

Site (Structure) : ForeignRP

Country: BELGIUM

Reporting Year: 2013

Facility:	UKAEA															
Description:	UKAEA, Dounreay, United Kingdom															
Processing part of facility UKAEA																
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>Category A</td><td>Yes</td><td>No</td></tr><tr><td>Category B</td><td>Yes</td><td>No</td></tr><tr><td>Category C</td><td>No</td><td>No</td></tr><tr><td>Category R</td><td>No</td><td>No</td></tr></tbody></table>	Waste Class	Actual	Planned	Category A	Yes	No	Category B	Yes	No	Category C	No	No	Category R	No	No	
Waste Class	Actual	Planned														
Category A	Yes	No														
Category B	Yes	No														
Category C	No	No														
Category R	No	No														
Type:	Conditioning															
Year opened:	0															

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Full Name: Belgoprocess, site 1

Description:

Official Website:

License Holder(s): Belgoprocess N.V.
Gravenstraat 73
B-2480 Dessel
Belgium

Waste management facilities that are located at this site:

Facility:	B103					
Description:	Building 103 is a storage facility for alpha contaminated unprocessed waste.					
Storage part of facility B103						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
Category A	No	No				
Category B	Yes	No				
Category C	No	No				
Category R	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:						
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B103	building	0	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B104
Description:	Building 104 is a storage facility for alpha contaminated unprocessed waste.

Storage part of facility B104

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	Yes	No
Category C	No	No
Category R	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?
B104	building	0	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B110X					
Description:	B110X is a new facility for the treatment and conditioning of solid (mostly alpha bearing) LLW-LL.					
Storage part of facility B110X						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
Category A	No	No				
Category B	Yes	No				
Category C	No	No				
Category R	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:						
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B110X	building	0	No	No	No	Yes
Processing part of facility B110X						
The following shows processing status for waste classes and SRS.						
Waste Class	Actual	Planned				
Category A	No	No				
Category B	No	No				
Category C	No	No				
Category R	No	No				
Type:	Treatment, Conditioning					
Year opened:	2003					
Comment	# 9915: Storage Facility B110X SRS:38 alpha sources are stored in this building.					

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B127
Description:	Building B127 is a storage facility for category B-waste in a bitumen or cement matrix. Bunkers A and B of this facility contain 220 liter drums; bunker C contains only 400 liter drums.

Storage part of facility B127

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	Yes	Yes
Category B	Yes	Yes
Category C	No	No
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity is evaluated at 18.393 packages, the equivalent of some 4.650 m ³ of conditioned waste.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B127A	bunker	1978	No	Yes	No	No
B127B	bunker	1978	No	No	No	No
B127C	bunker	1988	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B129
Description:	Building B129 is a storage facility for category C-waste other than the HLW produced during the abroad reprocessing of spent fuel. Bunker A contains containers of 60 liter; bunker B contains containers of 150 liter.

Storage part of facility B129

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	No	No
Category C	Yes	Yes
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity is evaluated at 2.572 packages, the equivalent of some 250 m ³ of vitrified waste.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B129A	bunker	1985	No	No	No	No
B129B	bunker	1985	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B136
Description:	Building B136 is a storage facility for vitrified category C- (bunker 170) and sumpercompacted category C-waste (bunker 140/141) produced during the abroad reprocessing of spent fuel.

Storage part of facility B136

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	No	No
Category C	Yes	Yes
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Present total capacity is evaluated at 590 packages of vitrified waste (bunker 170: some 90 m ³). Other capacities: see comments.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
140/141	bunker	2000	No	No	Yes	No
170	bunker	2000	No	No	Yes	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B150
Description:	Building 150 is a storage facility for category A-waste. This facility mainly contains 400 liter drums, but also packages of 500, 600, 1.000, 1.500, 1.600 and 2.200 liter.

Storage part of facility B150

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	Yes	No
Category B	No	No
Category C	No	No
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity is evaluated at 3.424 packages, the equivalent of some 2.000 m ³ of conditioned waste.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B150N	bunker	1986	No	Yes	No	No
B150C	bunker	1986	No	Yes	No	No
B150Z	bunker	1986	No	Yes	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B151
Description:	Building 151 is a storage facility for category A-waste. This building mainly contains 400 liter drums, but also packages of 220, 600, 1.000, 1.500 and 1.600 liter.

Storage part of facility B151

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	Yes	Yes
Category B	Yes	No
Category C	No	No
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity is evaluated at 35.422 packages, the equivalent of some 14.300 m ³ of conditioned waste.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B151A	bunker	1988	No	No	No	No
B151B	bunker	1988	No	Yes	No	No
B151C	bunker	1993	No	No	No	No
B151D	bunker	1993	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B153
Description:	Building 153 is a storage facility for alpha contaminated unprocessed waste.

Storage part of facility B153

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	Yes	No
Category C	No	No
Category R	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?
B153	building	0	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B155
Description:	Building B155 is a storage facility for alpha- and radiumcontaminated category B-waste. This building has been completed in 2003 and is operational since 2005.

Storage part of facility B155

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	Yes	Yes
Category C	No	No
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Bunker LAGAL (plutonium contaminated waste): 2.000 m ³ (i.e. 5.000 packages) Bunker RAGAL (radium contaminated waste): 2.000 m ³ (i.e. 5.000 packages)
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
LAGAL	bunker	0	No	No	Yes	No
RAGAL	bunker	0	No	No	Yes	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	B156
Description:	Building 156 is a purpose designed storage facility for irradiated fuel coming from the reactor BR3. This irradiated fuel is loaded into CASTOR containers, each container holding 30 fuel assemblies.

Storage part of facility B156

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	No	No
Category B	No	No
Category C	Yes	Yes
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity of building 156 consists of 8 CASTOR containers.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B156	building	2001	No	No	No	No

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	CILVA		
Description:	CILVA is Belgium's central facility for treatment and conditioning of solid and liquid LILW-SL.		
Processing part of facility		CILVA	
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	No	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
Type:	Treatment, Conditioning		
Year opened:	1994		

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	EUROBIT		
Description:	Eurobitumen is a facility for the treatment and conditioning of liquid, alpha bearing LILW-LL (i.e. sludge and evaporator concentrates) into bitumen.		
Processing part of facility		EUROBIT	
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	No	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
Type:	Treatment, Conditioning		
Year opened:	1978		

Site (Structure) : BP1

Country: BELGIUM

Reporting Year: 2013

Facility:	PAMELA		
Description:	PAMELA is a former pilot plant for vitrification of high-level liquid waste until 1991, generated by the Eurochimic reprocessing plant. During the 1990's, it was heavily modified and is currently used for the conditioning of solid ILW-LL		
Processing part of facility	PAMELA		
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	No	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
Type:	Conditioning		
Year opened:	1981		

Site (Structure) : BP2

Country: BELGIUM

Reporting Year: 2013

Full Name: Belgoprocess, site 2

Description:

Official Website:

License Holder(s): Belgoprocess N.V.
Gravenstraat 73
B-2480 Dessel
Belgium

Waste management facilities that are located at this site:

Facility:	B270M
Description:	Building 270M is a temporary storage facility for radium contaminated category B-waste. It will be replaced by a new facility in the near future (see B155, BP1-site).

Storage part of facility B270M

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category A	Yes	No
Category B	Yes	No
Category C	No	No
Category R	No	No

List SRS?	No
List UMMT?	No

Capacity:	Total capacity is evaluated at 4.899 packages.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
B270M	building	1980	Yes	No	No	Yes

Comment **# 9914: Storage Facility B270M**

SRS:274 SRS are stored in this building: 5 "multiple" sources, 2 neutron sources, 149 radium sources, 86 gamma sources, 17 beta sources and 15 alpha sources.

Site (Structure) : BP2

Country: BELGIUM

Reporting Year: 2013

Facility:	B280X															
Description:	B280X is a new treatment- and conditioning facility for solid, radium contaminated LILW.															
Processing part of facility B280X																
The following shows processing status for waste classes and SRS.																
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Waste Class	Actual	Planned														
Category A	No	No														
Category B	No	No														
Category C	No	No														
Category R	No	No														
Type:	Treatment, Conditioning															
Year opened:	2003															

Site (Structure) : BP2

Country: BELGIUM

Reporting Year: 2013

Facility:	KWB/BRE		
Description:	KWB/BRE is a treatment- and conditioning facility for liquid LLW-SL. This waste is conditioned into a bitumen matrix.		
Processing part of facility		KWB/BRE	
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	No	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
Type:	Treatment, Conditioning		
Year opened:	1980		

Site (Structure) : BP2

Country: BELGIUM

Reporting Year: 2013

Facility:	MUMMIE															
Description:	MUMMIE is a treatment- and conditioning facility for liquid LLW-SL and liquid LLW-LL. This waste is conditioned into a bitumen matrix.															
Processing part of facility	MUMMIE															
The following shows processing status for waste classes and SRS.																
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Waste Class	Actual	Planned														
Category A	No	No														
Category B	No	No														
Category C	No	No														
Category R	No	No														
Type:	Treatment, Conditioning															
Year opened:	1969															

Site (Structure) : BP2

Country: BELGIUM

Reporting Year: 2013

Facility:	PYROLYSIS		
Description:	The pyrolysis installation decomposes alpha contaminated organic liquids, originally generated by the former Eurochemic reprocessing plant and cements the remaining solid waste.		
Processing part of facility	PYROLYSIS		
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	No	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
Type:	Treatment, Conditioning		
Year opened:	1999		

Site (Structure) : UMICORE

Country: BELGIUM

Reporting Year: 2013

Full Name: Umicore N.V.

Description:

Official Website:

License Holder(s): UMICORE N.V.
 Broekstraat 31
 B-1000 Brussels
 Belgium

Waste management facilities that are located at this site:

Facility:	OPL					
Description:	OPL stands for the Dutch word "OPsLagplaats", which simply means storage facility. At present, it is considered by Umicore as a DISPOSAL facility, but the necessary licences are not yet acquired.					
Storage part of facility		OPL				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
Category A	No	No				
Category B	No	No				
Category C	No	No				
Category R	Yes	No				
List SRS?	No					
List UMMT?	No					
Capacity:						
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
OPL	bunker	1984	Yes	Yes	No	No

Site (Structure) : SEA_DUMP

Country: BELGIUM

Reporting Year: 2013

Full Name: Disposal sites of Belgian radioactive waste in the North Atlantic Ocean

Description:

Official Website:

License Holder(s): not applicable

Waste management facilities that are located at this site:

Facility:	SEA_DUMP		
Description:	Disposal sites of Belgian radioactive waste in the North Atlantic Ocean.		
Disposal part of facility			
SEA_DUMP			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
Category A	Yes	No	
Category B	No	No	
Category C	No	No	
Category R	No	No	
List SRS?	No		
List UMMT?	No		
Type:	sea dumping (deep sea disposal)		
Facility is modular?	No		
Depth (m):	65-5200	Host medium:	unknown (site not selected)
Phase Name	Start Year	End Year	Estimate
operation	1960	1982	True

Site (Data) : SEA_DUMP

Stock of waste as at December 2013

Country: BELGIUM

Reporting Year: 2013

Site Name: SEA_DUMP

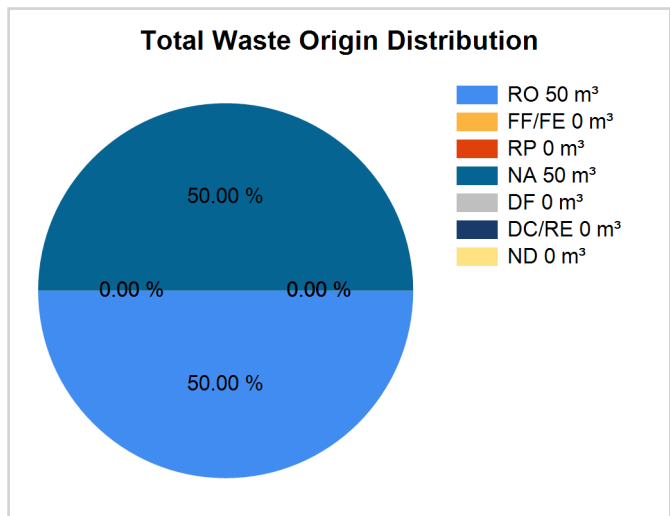
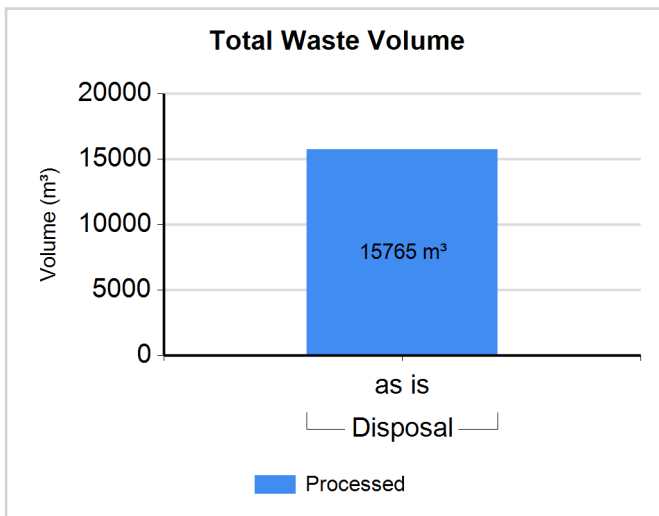
Full Name: Disposal sites of Belgian radioactive waste in the North Atlantic Ocean

Inventory Reporting Date: December 2013

Waste Matrix Used: NIRAS

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: Category A

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
Category A	Disposal	Y	N	15765.000	15765.000	50.00	0.00	0.00	50.00	0.00	0.00	0.00

Site (Structure) : Total

Country: BELGIUM

Reporting Year: 2013

Full Name:

Description:

Official Website:

License Holder(s):

Waste management facilities that are located at this site:

Facility:	NS																
Description:																	
<p>Storage part of facility NS</p> <p>The following shows storage 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>Category A</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Category B</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Category C</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Category R</td> <td>Yes</td> <td>No</td> </tr> </tbody> </table>			Waste Class	Actual	Planned	Category A	Yes	No	Category B	Yes	No	Category C	Yes	No	Category R	Yes	No
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Category B	Yes	No															
Category C	Yes	No															
Category R	Yes	No															
List SRS?	No																
List UMMT?	No																
Capacity:																	

Site (Data) : Total

Stock of waste as at December 2013

Country: BELGIUM

Reporting Year: 2013

Site Name: Total

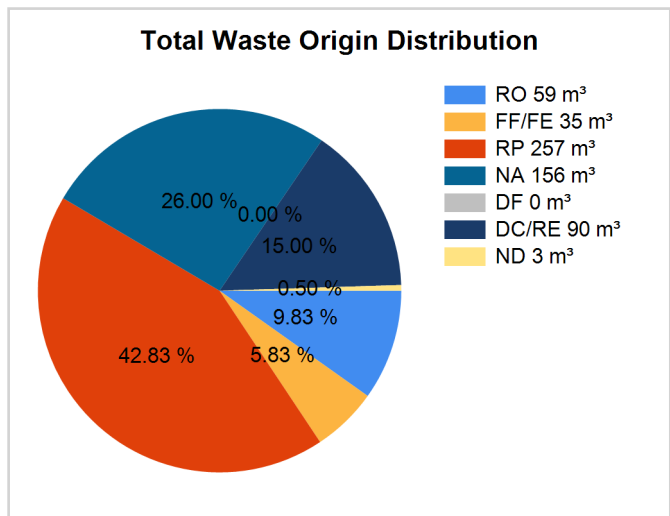
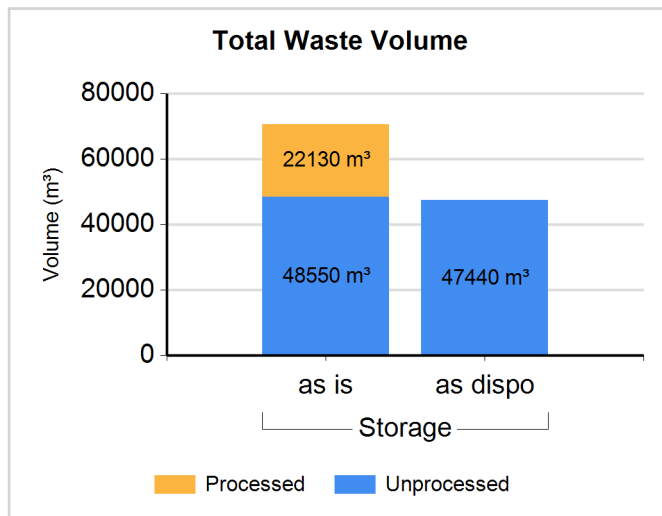
Full Name:

Inventory Reporting Date: December 2013

Waste Matrix Used: NIRAS

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: Category A

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
Category A	Storage	N	N	2755.000	1260.000	0.00	0.00	100.00	0.00	0.00	0.00	0.00
Category A	Storage	Y	N	16250.000	16250.000	38.00	0.00	0.00	46.00	0.00	16.00	0.00

Waste Class: Category B

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
Category B	Storage	N	N	795.000	1180.000	0.00	33.00	1.00	6.00	0.00	60.00	0.00
Category B	Storage	Y	N	5810.000	5810.000	21.00	2.00	62.00	4.00	0.00	8.00	3.00

Waste Class: Category C

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
Category C	Storage	Y	N	70.000	70.000	0.00	0.00	94.00	0.00	0.00	6.00	0.00

Waste Class: Category R

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
Category R	Storage	N	N	45000.000	45000.000	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Regulators

Country: BELGIUM

Reporting Year: 2013

Name:	Interior
Full Name:	Ministry of the Interior
Divison:	Ministry of the Interior
City or Town:	Brussels
Main Website:	

Name:	State
Full Name:	State Secretary for Energy and Sustainable Development
Divison:	State Secretary for Energy and Sustainable Development
City or Town:	Brussels
Main Website:	

Regulations / Laws

Country: BELGIUM

Reporting Year: 2013

Name:	08081980	
Title or Name:	Law of 8th August, 1980, outlining the organisation, funding and core business of ONDRAF/NIRAS.	
Reference Number:	08081980	
Date Promulgated or Proclaimed:	8/8/1980	Law

Name:	11011991	
Title or Name:	Law of 11th January, 1991, replacing the Law of 8th August 1980, outlining the organisation, funding and core business of ONDRAF/NIRAS.	
Reference Number:	11011991	
Date Promulgated or Proclaimed:	1/11/1991	Law

Name:	16101991	
Title or Name:	Royal Decree of 16th Octobre, 1991 modifying the Law of 11th January 1990, outlining the organisation, funding and core business of ONDRAF/NIRAS.	
Reference Number:	16011991	
Date Promulgated or Proclaimed:	10/16/1991	Law

Name:	12121997	
Title or Name:	Law of 12th December 1997, article 9: "Inventory of Nuclear Liabilities", outlining the mission of ONDRAF/NIRAS to develop and maintain an inventory of nuclear liabilities.	
Reference Number:	12121997	
Date Promulgated or Proclaimed:	12/12/1997	Law

Name:	30122001	
Title or Name:	Law of 30th December 2001, articles 87 up to 94, regarding the funding of the development of the inventory of nuclear liabilities	
Reference Number:	30122001	
Date Promulgated or Proclaimed:	12/30/2001	Law

Name:	15042003	
Title or Name:	Law regarding the build up of financial provisions for the decommissioning of nuclear power plants and the management of nuclear fuel, irradiated in these nuclear power plants.	
Reference Number:	15042003	
Date Promulgated or Proclaimed:	4/15/2003	Law

Regulations / Laws

Country: BELGIUM

Reporting Year: 2013

Name:	18112002		
Title or Name:	Law of 18th November 2002, regarding the qualification of radiological characterisation methods, processing methods and primary packages by ONDRAF/NIRAS.		
Reference Number:	18112002		
Date Promulgated or Proclaimed:	11/18/2002		Law

Milestones

Country: BELGIUM

Reporting Year: 2013

Start Year or Reference Year:	2006	End Year:	
Description of Milestone:			
On 23rd June 2006, the Belgian Government approves of surface disposal as the final solution for Belgium's low and intermediate level short-lived waste.			
Start Year or Reference Year:	2002	End Year:	
Description of Milestone:			
Building 156, a purpose-designed facility for the dry storage of irradiated fuel elements used by the PWR BR3, is put into operation on the Belgoprocess-site in Dessel..			
Start Year or Reference Year:	2001	End Year:	
Description of Milestone:			
EIG EURIDICE is the joint venture set up by ONDRAF/NIRAS and the Nuclear Research Centre to implement the PRACLAY programme. PRACLAY is a demonstration programme designed to prove the technical feasibility of disposing of category B- and category C-waste in deep clay layers.			
Start Year or Reference Year:	2000	End Year:	
Description of Milestone:			
The first transport of vitrified waste, arising from the abroad reprocessing of Belgian spent fuel, arrives at the Belgoprocess site in Mol-Dessel and is stored in building 136, a purpose-designed facility for the storage of category B- and category C-waste.			
Start Year or Reference Year:	1994	End Year:	
Description of Milestone:			
CILVA, a solid and liquid low level waste processing plant, is commissioned on the Belgoprocess site.			
Start Year or Reference Year:	1986	End Year:	
Description of Milestone:			
Since 1986, ONDRAF/NIRAS has used its subsidiary Belgoprocess N.V. in Mol-Dessel for processing and interim storage of radioactive waste and decommissioning of nuclear facilities.			
Start Year or Reference Year:	1986	End Year:	
Description of Milestone:			
Building 150, the first Belgian purpose-designed storage facility for category A-waste, is put into operation on the Belgoprocess-site.			
Start Year or Reference Year:	1985	End Year:	
Description of Milestone:			
The PWR's Doel 4 (980 MW) and Tihange 3 (980 MW) commence operations. They represent the final units of the Belgian fleet of nuclear power plants.			

Milestones

Country: BELGIUM

Reporting Year: 2013

Start Year or Reference Year:	1983	End Year:	
Description of Milestone:			
The PWR Tihange 2 (900 MW) commences operations.			
Start Year or Reference Year:	1982	End Year:	
Description of Milestone:			
The PWR Doel 3 (900 MW) commences operations.			
Start Year or Reference Year:	1980	End Year:	
Description of Milestone:			
ONDRAF/NIRAS, the Belgian National Agency for Radioactive Waste Management and Enriched Fissile Materials, is established by law in 1980.			
Start Year or Reference Year:	1978	End Year:	
Description of Milestone:			
Since 1978 great progress has been made in research on deep disposal of radioactive waste, thanks to the HADES underground laboratory at Mol.			
Start Year or Reference Year:	1975	End Year:	
Description of Milestone:			
The first commercial nuclear power plants are commissioned in Doel and Tihange. There are now seven reactors in operation, all of the PWR-type.			
Start Year or Reference Year:	1975	End Year:	
Description of Milestone:			
The PWR's Doel 1 (392,5 MW), Doel 2 (392,5 MW) and Tihange 1 (870 MW) commence operations.			
Start Year or Reference Year:	1966	End Year:	
Description of Milestone:			
The Belgian government gives the go-ahead for the construction of the first commercial nuclear power plants at Doel and Tihange.			
Start Year or Reference Year:	1963	End Year:	1987
Description of Milestone:			
The PWR BR3 (Belgian Research 3) commences operations. It is operated by the Nuclear Research Centre on its Mol-site. The BR3 is the first operational PWR in Western Europe. The operational era of the BR3 ends in 1987. It is the first PWR that is to be decommissioned in Western Europe.			

Milestones

Country: BELGIUM

Reporting Year: 2013

Start Year or Reference Year:	1959	End Year:	1978
Description of Milestone:			
Eurochemic's experimental spent nuclear fuel reprocessing plant is commissioned in Dessel, Belgium.			
Start Year or Reference Year:	1952	End Year:	
Description of Milestone:			
The Research Centre for Nuclear Energy Application is founded, later renamed the Nuclear Research Centre. The Nuclear Research Centre's site in Mol houses two research reactors and has a staff of 700.			
Start Year or Reference Year:	1922	End Year:	1986
Description of Milestone:			
Umicore opens a refinery in Sint-Jozef-Olen, Belgium. For years, the factory is the world's largest producer of radium.			

Policies

Country: BELGIUM

Reporting Year: 2013

National Systems

Policy		(Yes;Partially;No)
Q14	Has your Country implemented a national policy for radioactive waste management?	Yes
Strategies		(Yes;Partially;No)
Q15	Has your country developed strategies to implement a national policy?	Yes
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	Yes
Q20	implemented controls over radioactive waste generation	Yes
Q21	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
Q22	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
Q23	implemented appropriate research and development to support the operational and regulatory needs	Yes
Q24	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
Q25	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes
Responsibilities		(Complete;Incomplete)
Q28	establish and implement a legal framework for the management of radioactive waste	Complete
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	Complete
Q33	enforce compliance with regulatory requirements	Complete
Q34	implement the licensing process	Complete
Q35	advise the government	Complete
Q37	identify an acceptable destination for the radioactive waste	Incomplete
Q114	comply with legal requirements	Complete

Policies

Country: BELGIUM

Reporting Year: 2013

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	Yes
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	Yes
Q50	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes
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: BELGIUM

Reporting Year: 2013

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?	Yes - Some
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?	No
Q63	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Policies

Country: BELGIUM

Reporting Year: 2013

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?	Yes
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)?	Yes
Q122	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
Q123	Currently, are any of your country's wastes (processed or unprocessed, including the products of reprocessing) or spent fuel being stored in another country?	Yes
Q124	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	Yes
Q125	Currently, are there any wastes (processed or unprocessed, including the products of reprocessing) or spent fuel from another country being stored in your country?	Yes
Q126	Will some or all of the the product(s) of processing/reprocessing be returned to the country of origin?	Yes
Q127	Does the inventory you reported to the NEWMDB for your country include radioactive wastes that originated in another country or that were generated as a result of processing/reprocessing radioactive waste/spent fuel that originated in another country?	Yes

Policies

Country: BELGIUM

Reporting Year: 2013

Spent/Disused SRS

Registration		(Yes;No)
Q84	Is there a national level registry?	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?	No
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)?	No
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?	Yes
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?	No

Policies

Country: BELGIUM

Reporting Year: 2013

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? Yes - All

Facilities**(Yes;No)**

Q119 Does Your Country have any nuclear fuel cycle facilities? Yes

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

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

Q112 Does your Country require a time frame for the decommissioning of nuclear fuel cycle facilities once these facilities cease operation? No

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

Radionuclide Inventory by Waste Class

Country: BELGIUM

Reporting Year: 2013

No data available.

No data available.

No data available.

No data available.

No data available.

No data available.

No data available.

No data available.

Spent Fuel Inventory

Country: BELGIUM

Reporting Year: 2013

Spent Fuel **in Storage**
No data available.

Spent Fuel **in Disposal**
No data available.

Waste Management Infrastructure and Financing

Country: BELGIUM

Reporting Year: 2013

National Infrastructure

Nuclear Energy Context:	
Research & Development:	
Policies and Programs:	
Decommissioning and Dismantling:	
Legal Framework:	<p>All nuclear activities in Belgium are subject to the general regulations for the protection of the public, workers, and the environment against the hazards of the ionizing radiation. Licensing, control, and surveillance under these regulations is the responsibility of the Federal Agency for Nuclear Control (FANC), which was created in 1994 and is supervised by the federal Minister of the Interior. Since 1 September 2001 the supervision of nuclear activities is within the responsibility of the Federal Agency for Nuclear Control (FANC). The Royal Decree of 25 April 2014 amends the "Royal Decree of 30 March 1981 determining the missions and setting out the operating modes of the public agency for the management of radioactive waste and fissile materials" and determines the guiding principles that are the basis for establishing the fees for contributing to the long-term fund. The Belgian legal framework for safety consists mainly of:</p> <p>? The General Regulations regarding the protection of the public, the workers and the environment against the hazards of ionising radiation (GRR-2001) set the licensing system for the different facilities and activities involving ionising radiation.</p> <p>? The "Royal Decree on the Safety Requirements for Nuclear Installations", which incorporates all the WENRA RHWG reference levels into the Belgian regulations. This Royal Decree has a wider scope than the NPPs, as some generic reference levels were found applicable to other nuclear facilities (for example, the obligation to proceed to periodic safety reviews, to have a Safety Analysis Report, to have an integrated Management system, ...) including waste management and disposal facilities.</p>
Planned Improvements:	

National Financing

Nuclear installations:	
Legacy Wastes:	
Medical installations:	
Extractive Industries:	
Additional Comments:	

Waste Management Organisations

Country: BELGIUM

Reporting Year: 2013

Name:	
Full Name:	
Description:	
Address:	
Main Website:	
Year Established:	1
Legal Nature:	Public

Waste Management Strategies

Country: BELGIUM

Reporting Year: 2013

Waste Class	
Strategy	

Waste Management Responsibility

Country: BELGIUM

Reporting Year: 2013

Waste Class:	
Regulatory Authority:	
Treatment/Conditioning of Radioactive Waste:	
Transport of Radioactive Waste:	
Development/operation of interim Storage Facilities:	
Development/operation of Disposal Facilities:	
Waste Management Organisation:	
Additional Comments:	

Main Waste Producers

Country: BELGIUM

Reporting Year: 2013

Name:	
Full Name:	
Description:	
Address:	
Main Website:	

Future Outlook

Country: BELGIUM

Reporting Year: 2013

Outlook for the year: 2030

Data not available.

Outlook for the year: 2050

Data not available.

Outlook for the year: 2100

Data not available.