



**Country Waste Profile Report for
BELARUS
Reporting Year: 2007**

*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: BELARUS

Reporting Year: 2007

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 **# 98: Reason for use of IAEA Def. Class**

The IAEA classification was recognized as the most appropriate for reporting to the NEWMDB from the EKORES site in connection with the below stated motives.

Due to a number of objective and economical reasons management and regulation of radioactive waste in Belarus, except for "Chernobyl waste", has been so far performed in accordance with the regulations of the former USSR:

• Basic Sanitary rules for working with radioactive substances and other sources of ionizing radiation (OSP - 72/87);

• Basic sanitary rules for the Management of Radioactive Wastes (SPORO -85).

The last document embodies a classification for radioactive waste which is based:

• on dose rate (when measuring in 10 cm from surface) for solid waste and

• on concentration activity (Bq/l) for liquid waste.

The classification has not found an application in Belarus, where all generated wastes are disposed of at the same facility ("Ekores") in accordance with the acceptance criteria developed for this facility. At the same time the IAEA definitions have been widely used in practice of radioactive waste management despite they have not been adopted officially.

The Draft Strategy for the radioactive waste management in Belarus suggests for consideration a new national classification system, which has been developed in accordance with the recommendation of the IAEA TECDOC-1067 "Organization and implementation of national regulatory infrastructure governing protection against ionizing radiation and the safety of radiation sources, 1999". The proposed waste classes are quite the same as those proposed in the IAEA Safety Guide 111-G-1.1

Waste Classification Schemes

Country: BELARUS

Reporting Year: 2007

Waste Class Matrix: **ChernDW**

Yes

Description:

DWT include low level waste resulting from clean up activity in the territory affected by the Chernobyl Accident

DWI include low level waste resulting from decontamination of industrial (ventilation) equipment at Gomel enterprises.

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

Comment **# 99: Origin of CHERW class of waste**

As a result of the Chernobyl Accident a total of 46 450 km² (23 % of the country) of Belarus territory was subjected to radioactive contamination with Cs137 content in soil over 37 kBq/m². Decontamination and remediation activities in the affected areas just after the accident resulted in thousands of tons of low-level and very low level waste. Currently several tens of tons of such waste are formed annually in the course of clean-up activities in socially important locations and from decontamination of industrial equipment in the affected territory. The levels of radioactivity in part of the wastes are lower than those within IAEA LLW class, and are often in a range of only two orders of magnitude. However, the amounts of the waste are enormous and resulting chronic exposure can be a factor for a great number of people.

The grouping of such waste under a separate category (ChernDW) has been caused by its peculiarities and special requirements needed for their management, quite different from those for existing waste.

The special regulation in force 'Provisional sanitary rules for the management of decontamination waste of the Chernobyl origin' (SPOOD-98) define this class of waste as substances which are formed as a result of work to eliminate the consequences of the Chernobyl accident with a view to bring the state of environment in industrial and civil facilities in the contaminated areas to an acceptable radioecological level and which contain more than 0.96 kBq/kg of Cs-137 (for DWT). DW are divided into two different categories, each requiring a separate approach towards selection of processing technologies:

DWT are solid ChernDW, arisen in the course of clean-up activities in the affected areas (removed soil, roofing slate, other building materials)

DWI are solid and liquid ChernDW, generated during clean-up of equipment contaminated owing to intensive work of ventilation systems at Gomel enterprises in the period after the Chernobyl accident.

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	x		
Processed means:			x	x

Groups Overview

Country: BELARUS

Reporting Year: 2007

Reporting Group:	Brest
Inventory Reporting Date:	December 2007
Waste Matrix Used:	ChernDW
Description:	Construction Amalgamation "Brestoblcelstroj"

Site Name	Facility Name	Facilities Defined	
Stolin	Koshara		disposal

Reporting Group:	Ekores
Inventory Reporting Date:	December 2007
Waste Matrix Used:	IAEA Def.
Description:	Special enterprise under auspice of Unitary enterprise for waste management "Ekores"

Site Name	Facility Name	Facilities Defined	
RWF Ekores	Kanion 1		disposal
	Kanion 2		disposal
	Rep 1	storage	disposal
	Rep 2	storage	disposal
	Rep 3	storage	
	Well 1		disposal
	Well 2		disposal
	Well 3		disposal
	Well 4		disposal

Comment **# 145: What is "Ekores" ?**

Special enterprise "Ekores" is the part of the Unitary Enterprise "Ekores" that is intended for management of municipal waste. It is the only organization in the country that has license for storage/disposal of radioactive waste generated in industry, medical and research institutions.

Groups Overview

Country: BELARUS

Reporting Year: 2007

Reporting Group:	Military
Inventory Reporting Date:	December 2007
Waste Matrix Used:	IAEA Def.
Description:	There are two waste repositories that were used by Russian Federation military units and now are located in sites of their former dislocation.

Site Name	Facility Name	Facilities Defined		
Gomel-30	Gomel-30			disposal
Kolosovo	Kolosovo			disposal

Comment **# 9790: Reporting Group Military**

Military storage facilities were constructed in the 1960s in the sites of the Soviet military units. The military units left for the Russian Federation in 1994, and the facilities were abandoned.

The two earlier discovered and examined ones are cylindrical concrete wells with the diameter of approximately 1.5 m and depth up to 6 m loaded with sealed sources that are mostly control sources or sources for dosimeters (Cs-137, Co-60, Sr-90). Storage facilities do not appear on the lists of buildings and facilities that were transferred to the Republic of Belarus when the troops left. There is no documentation on them, which makes judgments on their radiation safety in the long term impossible. However, what is clear is that they do not meet the requirements of the national documents on radioactive waste management. Currently the advanced examination of the sites is being conducted. This aims at the assessment of radiation danger and identification of measures needed to prevent potential negative effect of the facilities on the population and environment.

Groups Overview

Country: BELARUS

Reporting Year: 2007

Reporting Group:	Polesie
Inventory Reporting Date:	December 2007
Waste Matrix Used:	ChernDW
Description:	Republican Specialized Unitary Enterprise "Polesie"

Site Name	Facility Name	Facilities Defined		
Chechersk	Shepetov.			disposal
Complex	Complex	processing		
Khoiniki	Babchin-3			disposal
Narovlja	Khatki			disposal
Vetka	Podkamene			disposal
	Rechki			disposal

Comment **# 173: What is Polesie enterprise?**

Specialized enterprise 'Polesie' was set up in 1992 under the auspices of the Committee for Liquidation of Consequences of the Chernobyl Accident for conducting activity on clean up of the territory, contaminated by the Chernobyl fall-out in Gomel Region. The work includes removal of contaminated soil, decontamination of installations and industrial equipment, dismantling of structures and buildings being not subjected to clean-up. The waste arised from this activity have been named "the decontamination wastes" (hereinafter ChernDW).

Since 1992 Polyésie has operated four near-surface repositories, constructed from type designs specially for ChernDW in the Gomel region.

The enterprise also operates a facility for immobilization of liquid waste generated in the process of decontamination of ventilation equipment polluted as a consequences of the Chernobyl accident.

Comment **# 9712: Reporting Group Polyésie**

Decontamination Waste Disposal Site (DWDS) of the first category - special building (container) used for disposal of decontamination waste with specific Cs-137 activity from 100kBq/kg and more that ensures reliable isolation of the waste due to special engineering barriers and hydrotechnical measures and that has a system of constant control over its condition and its affect on the environment.

Decontamination Waste Disposal Site (DWDS) of the second category - building for near surface disposal of decontamination waste with specific Cs-137 activity from 1 to 100 kBq/kg that prevents further migration of radionuclides into the environment due to the use of simple protective clay screens. DWDS equipment should ensure a possibility of control over its condition and its affect on the environment.

Decontamination Waste Disposal Site (DWDS) of the third category - near surface decontamination waste disposal sites set up following the accident without design projects and without taking into account hydrological limitations that require additional measures aimed at their technical improvement and ensuring control over their condition and their affect on the environment.

Groups Overview

Country: BELARUS

Reporting Year: 2007

Reporting Group:	Radon
Inventory Reporting Date:	December 2007
Waste Matrix Used:	ChernDW
Description:	Republican Unitary Specialized Enterprise "Radon"

Site Name	Facility Name	Facilities Defined		
Cherikov	Lysovka			disposal
Kostyukov.	Kolodezsk.			disposal
Krasnopol.	Gatskovic.			disposal
Slavgorod	Kulikovka			disposal

Comment **# 178: What is Radon enterprise ?**

Like the enterprise "Polesie" in Gomel, a specialized enterprise 'Radon' was set up in Mogilev, specially for conducting activity on clean up of the territory, contaminated by the Chernobyl fall-out. The work results in generating "decontamination wastes" (hereinafter ChernDW) which are disposed of in four near-surface repositories, constructed from type designs. According to the existing regulations these repositories are called DWR -2 .They represent territories with one or two reservoirs banked up with embankments 4 m high. The compacted earth bottom and slopes are covered with pugged clay barriers of 0.5 m thick, which are then covered with stabilized polyethylene film. The film is buried with a protective earth layer 0.6 m thick. The repositories are equipped with a net of bore holes along its perimeter.

Site (Structure) : Stolin

Country: BELARUS

Reporting Year: 2007

Full Name: Stolin near surface repository

Location: Brest province, Stolin

Description:

Official Website:

License Holder(s): Stolin Republican Unitary Building Enterprise #32 under Construction Amalgamation
"Brestoblcelstroj"

Comment # 172: Disposal Facility "Kashary"

The site covers one near surface Decontamination Waste Repository (DWR) of type 2 "Kashary" intended for disposal of waste generated in the process of clean up activity in the areas of Brest Province which were contaminated as a result of the Chernobyl Accident. This is one of 8 DWR, constructed from type design specially for Chernobyl waste disposal. All the repositories of this type represent territories with one or two reservoirs banked up with embankments 4 m high. The compacted earth bottom and slopes are covered with pugged clay barriers of 0.5 m thick, which are then covered with stabilized polyethylene film. The film is buried with a protective earth layer 0.6 m thick. The repository is equipped with a net of bore holes along its perimeter

Waste management facilities that are located at this site:

Site (Structure) : Stolin

Country: BELARUS

Reporting Year: 2007

Facility:	Koshara
Description:	Decontamination waste repository of the second category - DWR-II "Koshara"

Disposal part of facility Koshara

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	No
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	12500	Capacity planned (m3):	12500

Depth (m):	3	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
design	1993	1994	False
construction	1994	1995	False
commissioning	1995	1995	False
operation	1995	2003	False

Site (Data) : Stolin

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Stolin

Full Name: Stolin near surface repository

Inventory Reporting Date: December 2007

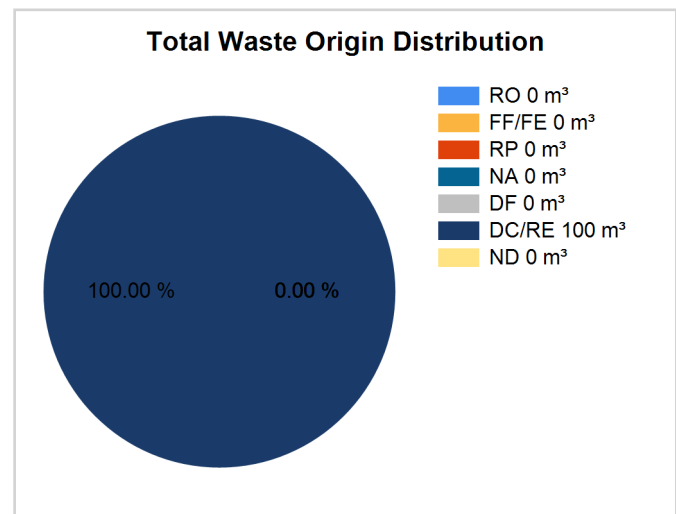
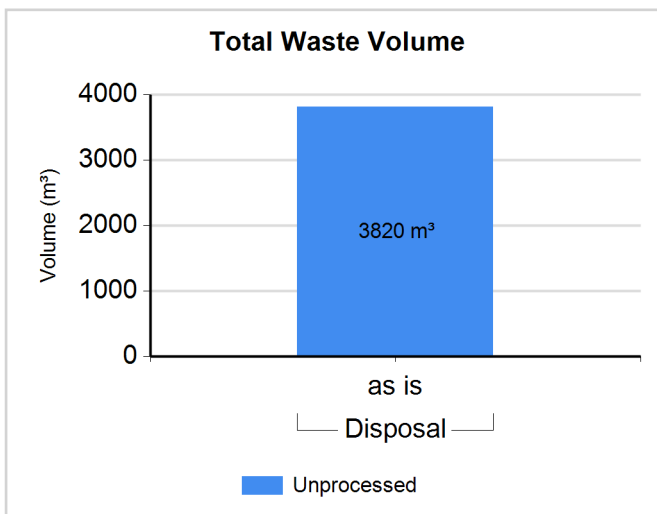
Waste Matrix Used: ChernDW

Comment # 172: Disposal Facility "Kashary"

The site covers one near surface Decontamination Waste Repository (DWR) of type 2 "Kashary" intended for disposal of waste generated in the process of clean up activity in the areas of Brest Province which were contaminated as a result of the Chernobyl Accident. This is one of 8 DWR, constructed from type design specially for Chernobyl waste disposal. All the repositories of this type represent territories with one or two reservoirs banked up with embankments 4 m high. The compacted earth bottom and slopes are covered with pugged clay barriers of 0.5 m thick, which are then covered with stabilized polyethylene film. The film is buried with a protective earth layer 0.6 m thick. The repository is equipped with a net of bore holes along its perimeter

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Koshara	N	N	3820.000	3820.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Full Name: Special enterprise for radioactive waste storage/disposal under auspice of Unitary enterprise for waste management "Ekores"

Location: About 10 km away from Minsk

Description:

Official Website:

License Holder(s): Unitary enterprise for waste management "Ekores"
35, Selitskogo str.
Minsk

Comment **# 147: What is "RWF Ekores" ?**

RWF Ekores (radioactive waste facility Ekores) is a special enterprise for management of radioactive waste. This is a typical RADON-type facility, constructed in accordance with the standard project TP-416-9-1 "Disposal radioactive waste enterprise" developed by Moscow Project Institute (GSPI) for Radon-type facilities of the former USSR in 1970. The site comprised laundry, garage for transport vehicles and 2 below surface, reinforced concrete vaults for solid radioactive waste, all of them being put in operation in 1977.

There are 2 concrete lined trenches containing so called "historic" radioactive waste in the territory of the site. They were filled with solid waste between 1964 and 1977.

The "Ekores" radioactive waste facility is situated about 10 km from the center of city of Minsk, a few hundred meters from the location of the former Nuclear Research Reactor and Scientific Center «Sosny». It is the only facility in the country that has been intended for storage/disposal of radioactive waste from small users.

Currently this site is under reconstruction. The reconstruction project is directed at improving physical protection and setting advanced technologies for new coming wastes and spent sources. It also makes provisions that the wastes currently disposed in the vaults and trenches should be retrieved, sorted and treated in the same way as new coming wastes.

Comment **# 150: Historic Ekores Disposal Facility**

The historic Ekores waste disposal facility was originally commissioned in 1964 and comprised 2 concrete lined trenches, up to 4 meters deep. A variety of solid radioactive waste (including sealed sources containing short-lived and long-lived radionuclides) was placed in these trenches. The solid waste was not segregated in the different waste types or conditioned. The trenches were filled with waste between 1964 and 1977. In 1977 the trenches were closed. Concrete slabs were placed on top of the trenches and these were covered by a layer of bitumen and by a mounded layer of soil. Today the mounds over the trenches can be seen with local vegetation growing on them. At the current rate the total activity of the waste disposed of in the trenches amounts to 17,6 TBq

Comment **# 151: Ekores storage and disposal facilities**

Second generation waste storage/disposal facilities (repositories) were put into operation in 1977. This comprised 2 below surface, reinforced concrete vaults. Each vault was covered by a lightly constructed building to provide environmental protection and acceptable working conditions to operate the facility throughout the year. Each vault has a storage capacity of 830 m³ and is divided into 8 cells. In addition, at one end of each vault there are a pair of so-called «wells» for spent sourcedisposal.

Each of the cells is covered by six concrete slabs. To load waste into a cell, one of the slabs is lifted by overhead crane, the waste is tipped into the cell and the concrete slab is replaced. According to the design the total activity of wastes to be disposed of in the vault is 7,4 TBq/a, with a specific activity of 3,7 MBq/kg.

The waste is collected from the waste producer by "Ekores" staff. It is not conditioned or volume reduced prior to emplacement in the repository. When a storage cell is considered to be full, free space at the top of the cell is filled with sand and a concrete grout.

One of the repositories (Repository # 1) is full to capacity. The total activity of disposed wastes is 252,8 TBq. The concrete slabs over the storage cells have been covered with a layer of asphalt, thus preventing further access to the cells.

It should be noted that in 1989, irradiated fuel from the nearby research reactor was placed in one of the cells in this repository. This comprises around 2kg of ' U in 10 purpose-built stainless steel containers.

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Comment # 152: Ekores SRS Facilities

SRS Inventory

Storage and disposal of spent sealed radioactive sources at the Ekores Waste Disposal Facility

All spent SRS which had entered the facility until 1977 were buried in the concrete trenches (Kanyon 1, Kanyon 2). After 1977 there existed two options for spent SRS disposal. Those in protective containers with upper wall unloading were disposed of in the vaults for low and intermediate level waste (Rep 1 and Rep 2) together with their biological shielding. SRS from containers with bottom unloading were disposed of in the bore-hole repositories: Well 1, Well 2, Well 3, Well 4.

By the mid of 90s Kanyon 1, Kanyon 2, and Rep 1 had been closed. Spent SRS disposed of in these repositories are declared today as disposed (not retrievable) radioactive waste. Within Waste data Component of the NEWMDB, the inventory of these SRSs is included into the inventory of LILW in disposal facilities at the Ekores site.

SRS in Rep 2 should be regarded as spent SRS (waste) being in storage in the facilities intended for storage of both SRS and LILW. The structure of the Framework Section of the NEWMDB does not permit to report such kind "mixed" storage. So to settle the issue we need to define an additional dedicated SRS facility "Rep 2SS" at the Ekores site, which is in reality the same facility Rep 2, used for storage of all kinds of wastes.

It should be emphasised that SRS inventory reported to the Waste Data Component of the NEWMDB shows not all but only the most important SRS being under storage and disposal at the Ekores site.

Comment # 283: Waste inventory at the RWF "Ekores"

Due to the fact that at the Ekores site waste inventory information is available only in "kg", not in m3, the input screens for inventories of the waste in the Ekores facilities show weight, not volumes (1 m3 = 1 tonne)

Waste management facilities that are located at this site:

Facility:	Kanion 1
Description:	Kanion 1 is the name of closed "historical" repository #1 which contains variety of unconditioned waste generated by small users.

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Disposal part of facility Kanion 1

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	200	Capacity planned (m3):	200

Depth (m):	3	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1958	1960	False
site selection	1960	1961	False
design	1961	1962	False
construction	1961	1963	False
commissioning	1963	1963	False
operation	1963	1977	False
closure	1977	1977	False
institutional control	1977		False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Kanion 2		
Description:	Kanion 2 is the name of closed "historical" repository # 2 which contains variety of unconditioned waste generated by small users.		
Disposal part of facility Kanion 2			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	Yes	No	
LILW-LL	Yes	No	
HLW	No	No	
List SRS?	No		
List UMMT?	No		
Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	225	Capacity planned (m3):	225
Depth (m):	3	Host medium:	sedimentary (sand)
Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1958	1960	False
site selection	1960	1961	False
design	1961	1962	False
construction	1961	1963	False
commissioning	1963	1963	False
operation	1963	1977	False
closure	1977	1977	False
institutional control	1977		False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Rep 1
Description:	Repository 1 is the name of closed repository # 1, which contains variety of conditioned and unconditioned waste generated by small users. It contains also ten containers with irradiated nuclear material.

Storage part of facility Rep 1

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
LILW-SL	Yes	No
LILW-LL	Yes	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?
Rep 1	trench (lined)	0	Yes	No	No	No

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Disposal part of facility Rep 1

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	820	Capacity planned (m3):	820

Depth (m):	3	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1970	1972	False
construction	1975	1976	False
commissioning	1977	1977	False
operation	1977	1992	False
closure	1992	1993	False
institutional control	1993		False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Rep 2
Description:	Repository 2 for storage and disposal of solid low- and intermediate level waste.

Storage part of facility Rep 2

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
LILW-SL	Yes	Yes
LILW-LL	Yes	Yes
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?
Rep 2	trench (lined)	1979	No	No	No	No

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Disposal part of facility **Rep 2**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
LILW-SL	Yes	Yes
LILW-LL	Yes	Yes
HLW	Yes	Yes

List SRS?	Yes
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	705	Capacity planned (m3):	820

Depth (m):		Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
operation	1979		True

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Rep 3					
Description:	Rep 3 is the storage facility for spent sealed sources.					
Storage part of facility Rep 3						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
LILW-SL	No	No				
LILW-LL	No	No				
HLW	No	No				
List SRS?	Yes					
List UMMT?	No					
Capacity:	There are 7 wells for spent gamma sources and 4 wells for alpha and beta sources.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
Rep 3	well	2003	No	No	No	Yes

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Well 1		
Description:	Bore-hole repository for disposal of SRS		
Disposal part of facility			
Well 1			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	Yes		
List UMMT?	No		
Type:	engineered surface		
Facility is modular?	No		
Capacity existing (m3):	1	Capacity planned (m3):	1
Depth (m):	4	Host medium:	crystalline rock (basalt)
Phase Name	Start Year	End Year	Estimate
operation	1977	2000	False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Well 2		
Description:	Bore-hole repository for disposal of SRS		
Disposal part of facility			
Well 2			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	Yes		
List UMMT?	No		
Type:	engineered surface		
Facility is modular?	No		
Capacity existing (m3):	1	Capacity planned (m3):	1
Depth (m):	4	Host medium:	crystalline rock (basalt)
Phase Name	Start Year	End Year	Estimate
operation	1977	2000	False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Well 3		
Description:	Bore-hole repository for disposal of SRS		
Disposal part of facility			
Well 3			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	Yes		
List UMMT?	No		
Type:	engineered surface		
Facility is modular?	No		
Capacity existing (m3):	1	Capacity planned (m3):	1
Depth (m):	4	Host medium:	crystalline rock (basalt)
Phase Name	Start Year	End Year	Estimate
operation	1977		False

Site (Structure) : RWF Ekores

Country: BELARUS

Reporting Year: 2007

Facility:	Well 4		
Description:	Bore-hole repository for disposal of SRS		
Disposal part of facility			
Well 4			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	Yes		
List UMMT?	No		
Type:	engineered surface		
Facility is modular?	No		
Capacity existing (m3):	1	Capacity planned (m3):	1
Depth (m):	4	Host medium:	crystalline rock (basalt)
Phase Name	Start Year	End Year	Estimate
operation	1977		False

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: RWF Ekores

Full Name: Special enterprise for radioactive waste storage/disposal under auspice of Unitary enterprise for waste management "Ekores"

Inventory Reporting Date: December 2007 Waste Matrix Used: IAEA Def.

Comment **# 147: What is "RWF Ekores" ?**

RWF Ekores (radioactive waste facility Ekores) is a special enterprise for management of radioactive waste. This is a typical RADON-type facility, constructed in accordance with the standard project TP-416-9-1 "Disposal radioactive waste enterprise" developed by Moscow Project Institute (GSPI) for Radon-type facilities of the former USSR in 1970. The site comprised laundry, garage for transport vehicles and 2 below surface, reinforced concrete vaults for solid radioactive waste, all of them being put in operation in 1977.

There are 2 concrete lined trenches containing so called "historic" radioactive waste in the territory of the site. They were filled with solid waste between 1964 and 1977.

The "Ekores" radioactive waste facility is situated about 10 km from the center of city of Minsk, a few hundred meters from the location of the former Nuclear Research Reactor and Scientific Center «Sosny». It is the only facility in the country that has been intended for storage/disposal of radioactive waste from small users.

Currently this site is under reconstruction. The reconstruction project is directed at improving physical protection and setting advanced technologies for new coming wastes and spent sources. It also makes provisions that the wastes currently disposed in the vaults and trenches should be retrieved, sorted and treated in the same way as new coming wastes.

Comment **# 150: Historic Ekores Disposal Facility**

The historic Ekores waste disposal facility was originally commissioned in 1964 and comprised 2 concrete lined trenches, up to 4 meters deep. A variety of solid radioactive waste (including sealed sources containing short-lived and long-lived radionuclides) was placed in these trenches. The solid waste was not segregated in the different waste types or conditioned. The trenches were filled with waste between 1964 and 1977. In 1977 the trenches were closed. Concrete slabs were placed on top of the trenches and these were covered by a layer of bitumen and by a mounded layer of soil. Today the mounds over the trenches can be seen with local vegetation growing on them. At the current rate the total activity of the waste disposed of in the trenches amounts to 17,6 TBq

Comment **# 151: Ekores storage and disposal facilities**

Second generation waste storage/disposal facilities (repositories) were put into operation in 1977. This comprised 2 below surface, reinforced concrete vaults. Each vault was covered by a lightly constructed building to provide environmental protection and acceptable working conditions to operate the facility throughout the year. Each vault has a storage capacity of 830 m³ and is divided into 8 cells. In addition, at one end of each vault there are a pair of so-called «wells» for spent sourcedisposal.

Each of the cells is covered by six concrete slabs. To load waste into a cell, one of the slabs is lifted by overhead crane, the waste is tipped into the cell and the concrete slab is replaced. According to the design the total activity of wastes to be disposed of in the vault is 7,4 TBq/a, with a specific activity of 3,7 MBq/kg.

The waste is collected from the waste producer by "Ekores" staff. It is not conditioned or volume reduced prior to emplacement in the repository. When a storage cell is considered to be full, free space at the top of the cell is filled with sand and a concrete grout.

One of the repositories (Repository # 1) is full to capacity. The total activity of disposed wastes is 252,8 TBq. The concrete slabs over the storage cells have been covered with a layer of asphalt, thus preventing further access to the cells.

It should be noted that in 1989, irradiated fuel from the nearby research reactor was placed in one of the cells in this repository. This comprises around 2kg of ²³⁵U in 10 purpose-built stainless steel containers.

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Comment # 152: Ekores SRS Facilities

SRS Inventory

Storage and disposal of spent sealed radioactive sources at the Ekores Waste Disposal Facility

All spent SRS which had entered entered the facility until 1977 were buried in the concrete trenches (Kanyon 1, Kanyon 2,). After 1977 there existed two options for spent SRS disposal. Those in protective containers with upper wall unloading were disposed of in the vaults for low and intermediate level waste (Rep 1 and Rep 2) together with their biological shielding. SRS from containers with bottom unloading were disposed of in the bore-hole repositories: Well 1, Well 2, Well 3, Well 4.

By the mid of 90s Kanyon 1, Kanyon 2, and Rep 1 had been closed. Spent SRS disposed of in these repositories are declared today as disposed (not retrievable) radioactive waste. Within Waste data Component of the NEWMDB, the inventory of these SRSs is included into the inventory of LILW in disposal facilities at the Ekores site.

SRS in Rep 2 should be regarded as spent SRS (waste) being in storage in the facilities intended for storage of both SRS and LILW. The structure of the Framework Section of the NEWMDB does not permit to report such kind "mixed" storage. So to settle the issue we need to define an additional dedicated SRS facility "Rep 2SS" at the Ekores site, which is in reality the same facility Rep 2, used for storage of all kinds of wastes.

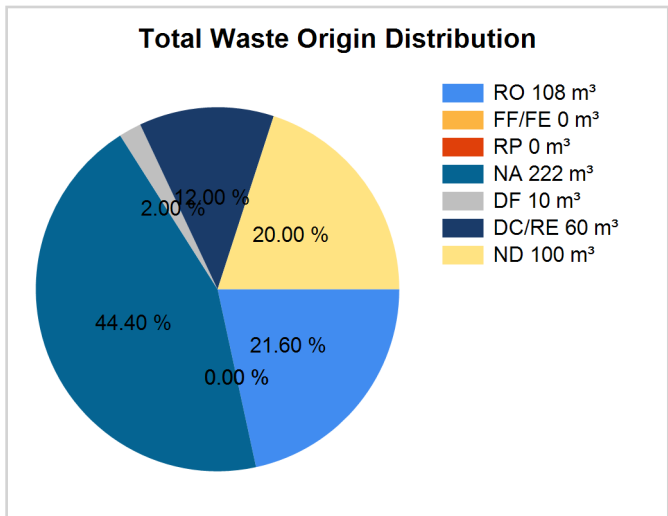
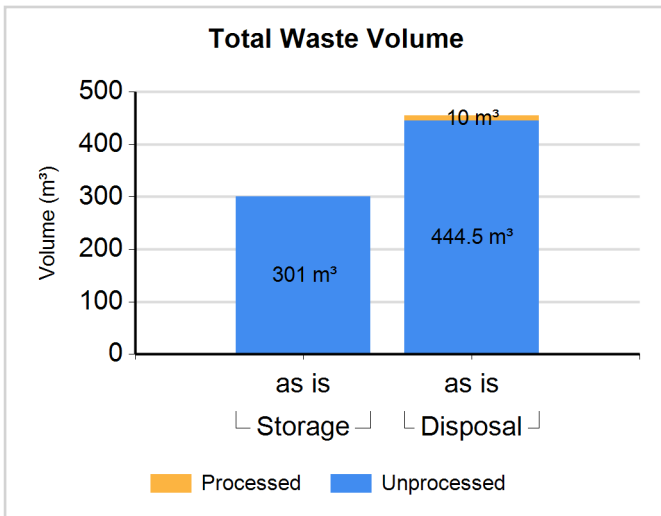
It should be emphasised that SRS inventory reported to the Waste Data Component of the NEWMDB shows not all but only the most important SRS being under storage and disposal at the Ekores site.

Comment # 283: Waste inventory at the RWF "Ekores"

Due to the fact that at the Ekores site waste inventory information is available only in "kg", not in m3, the input screens for inventories of the waste in the Ekores facilities show weight, not volumes (1 m3 = 1 tonne)

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.

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Waste Class: LILW-SL

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m ³)	Volume "as dispo" (m ³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Storage	N	N	270.000	270.000	8.00	0.00	0.00	22.00	10.00	60.00	0.00
LILW-SL	Disposal	N	N	403.000	403.000	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Waste Class: LILW-LL

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m ³)	Volume "as dispo" (m ³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-LL	Storage	N	N	31.000	31.000	0.00	0.00	0.00	100.00	0.00	0.00	0.00
LILW-LL	Disposal	N	N	41.500	41.500	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Waste Class: HLW

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m ³)	Volume "as dispo" (m ³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
HLW	Disposal	Y	N	10.000	10.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Spent Sources <=30 years in Storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			c	o	n	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				2.200E-004	1989.01
	2.200E-004										
Ce-139	1			N	Y	N				1.000E-004	1989.01
	1.000E-004										
Ce-144	13			N	Y	N				2.600E+001	1989.01
	2.600E+001										
Co-57	3			N	Y	N				2.500E-004	1989.01
	2.500E-004										
Co-60	31	165		N	Y	N				2.101E+003	1989.01
	9.300E-001	2.100E+003									
Co-60	17			N	Y	N				6.000E-004	1989.01
	6.000E-004										
Co-60	39			N	Y	N				7.800E-001	1989.01
	7.800E-001										

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Cs-137	34	11		N	Y	N	7.800E+002	1989.01
	7.100E-003	7.800E+002						
Cs-137	48	5		N	Y	N	6.778E+001	1989.01
	7.800E-001	6.700E+001						
Cs-137	22	51		N	Y	N	3.100E+003	1989.01
	4.200E-002	3.100E+003						
Hg-203	1			N	Y	N	3.000E-004	1989.01
	3.000E-004							
Ir-192		41		N	Y	N	1.000E+005	1989.01
		1.000E+005						
Ir-192		103		N	Y	N	2.400E+005	1989.01
		2.400E+005						
Kr-85	2	1		N	Y	N	3.737E+001	1989.01
	3.700E-001	3.700E+001						
Mn-54	1			N	Y	N	8.400E-005	1989.01
	8.400E-005							
Mn-54	1			N	Y	N	1.000E-004	1989.01
	1.000E-004							
Na-22	1			N	Y	N	1.200E-004	1989.01
	1.200E-004							
Se-75		6		N	Y	N	2.200E+004	1989.01
		2.200E+004						
Se-75		13		N	Y	N	5.400E+004	1989.01
		5.400E+004						
Sn-113	1			N	Y	N	9.600E-005	1989.01
	9.600E-005							
Sr-90	290			N	Y	N	3.400E+000	1989.01
	3.400E+000							
Sr-90	169			N	Y	N	3.200E+000	1989.01
	3.200E+000							

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Sr-90	927			N	Y	N	4.300E+000	1989.01
	4.300E+000							
Th-228	1			N	Y	N	2.800E-005	1989.01
	2.800E-005							
Tl-204	2			N	Y	N	1.200E-005	1989.01
	1.200E-005							
Y-88	2			N	Y	N	1.400E-004	1989.01
	1.400E-004							
Zn-65	1			N	Y	N	9.900E-005	1989.01
	9.900E-005							

Spent Sources <=30 years in Disposition

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					
Ce-139	2			N	Y	N	5.400E-005	1989.01
	5.400E-005							
Co-60	12			N	Y	N	5.600E+000	1989.01
	5.600E+000							
Co-60			3	N	Y	N	2.000E+005	1989.01
			2.000E+005					
Co-60	127	1841		Y	N	N	1.302E+005	1980.01
	2.300E+002	1.300E+005						
Co-60	432	821	9	Y	N	N	4.000E+006	1990.01
	4.100E+002	2.300E+006	1.700E+006					
Co-60	39	66	5	Y	N	N	1.890E+006	2000.01
	1.100E+001	9.500E+005	9.400E+005					
Co-60	5			N	Y	N	8.200E-003	1989.01
	8.200E-003							

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Cs-137	185	508		Y	N	N	2.003E+005	1980.01
	2.700E+002	2.000E+005						
Cs-137	229	559	5	Y	N	N	7.901E+005	1990.01
	1.300E+002	3.100E+005	4.800E+005					
Cs-137	1	136		N	Y	N	9.102E+003	1989.01
	1.900E+000	9.100E+003						
Cs-137	25	101		Y	N	N	6.707E+003	1990.12
	7.100E+000	6.700E+003						
Cs-137	19	53		Y	N	N	1.101E+004	1991.12
	5.700E+000	1.100E+004						
Cs-137	123	2		Y	N	N	3.002E+003	1992.12
	1.900E+000	3.000E+003						
Cs-137	14			Y	N	N	1.100E+001	1993.12
	1.100E+001							
Cs-137	3	1		Y	N	N	1.900E+002	1994.12
	3.700E-002	1.900E+002						
Cs-137	1	1		Y	N	N	2.600E+002	1995.12
	4.000E-004	2.600E+002						
Cs-137	10	4		Y	N	N	4.001E+002	1996.12
	1.200E-001	4.000E+002						
Cs-137	3	1		Y	N	N	9.470E+000	1997.12
	9.700E-001	8.500E+000						
Cs-137	2			Y	N	N	5.900E-003	1998.12
	5.900E-003							
Cs-137	12	27		Y	N	N	1.903E+004	1999.12
	2.700E+001	1.900E+004						
Cs-137	2			Y	N	N	2.400E-001	2000.12
	2.400E-001							
Cs-137	21	256		N	Y	N	4.100E+006	1989.01
	7.000E-001	4.100E+006						

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Cs-137	22	163		N	Y	N	5.845E+003	1989.01
	4.500E+001	5.800E+003						
Eu-152	3			N	Y	N	3.000E-005	1989.01
	3.000E-005							
Fe-55	1			N	Y	N	2.400E-005	1989.01
	2.400E-005							
H-3	12	3		N	Y	N	1.100E+002	1989.01
	4.100E-002	1.100E+002						
H-3		142		N	Y	N	5.700E+003	1989.01
		5.700E+003						
H-3	1	12		N	Y	N	8.900E+002	1989.01
	3.700E-003	8.900E+002						
Ir-192	471	3198		Y	N	N	5.901E+004	2003.01
	5.900E+000	5.900E+004						
Na-22	3			N	Y	N	8.600E-005	1989.01
	8.600E-005							
Ru-97	5			N	Y	N	2.100E-001	1989.01
	2.100E-001							
Se-75	13	76		Y	N	N	8.838E+003	1980.01
	3.800E+001	8.800E+003						
Se-75	6	63		Y	N	N	2.102E+004	1990.01
	2.000E+001	2.100E+004						
Se-75	15	9		Y	N	N	7.413E+003	2000.01
	1.300E+001	7.400E+003						
Sr-90	3915	120		Y	N	N	3.700E+003	1990.01
	1.800E+003	1.900E+003						
Sr-90	1119	138		Y	N	N	2.072E+003	2000.01
	7.200E+001	2.000E+003						
Sr-90	135			N	Y	N	3.200E+001	1989.01
	3.200E+001							

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Sr-90	95			N	Y	N	7.700E+001	1989.01
	7.700E+001							
Sr-90	20			N	Y	N	7.500E+000	1989.01
	7.500E+000							
Y-88	1			N	Y	N	2.600E-005	1989.01
	2.600E-005							
Y-90	2290			Y	N	N	5.300E+002	
	5.300E+002							

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

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	1245		N	Y	N	6.900E-002	1989.01
	6.900E-002						
Am-241	1183		N	Y	N	4.400E-002	1989.01
	4.400E-002						
C-14	6		N	Y	N	1.300E-004	1989.01
	1.300E-004						
Ni-63	4		N	Y	N	4.800E+000	1989.01
	4.800E+000						
Ni-63	5		N	Y	N	6.100E+000	1989.01
	6.100E+000						
Ni-63	6		N	Y	N	5.500E+000	1989.01
	5.500E+000						
Pu-239		2	N	Y	N	7.200E+002	1989.01
		7.200E+002					
Pu-239	8317		N	Y	N	2.500E+001	1989.01
	2.500E+001						
Pu-239	7		N	Y	N	8.400E+000	1989.01
	8.400E+000						
Pu-239	3417		N	Y	N	4.400E+001	1989.01
	4.400E+001						
Pu-239	6787		N	Y	N	1.400E+001	1989.01
	1.400E+001						
Ra-226		1	N	Y	N	2.600E+000	1989.01
		2.600E+000					

Spent Sources > 30 years in Disposition

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

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	274	25	N	Y	N	2.975E+002	2004.12
	7.500E+000	2.900E+002					
Am-241		14	N	Y	N	3.000E+001	1989.01
		3.000E+001					
Am-241	10		N	Y	N	3.900E-003	1989.01
	3.900E-003						
Ni-63	14	1	N	Y	Y	4.740E+001	1989.12
	6.400E+000	4.100E+001					
Ni-63	4		N	Y	Y	3.100E+000	1990.12
	3.100E+000						
Ni-63	11		N	Y	Y	1.300E+001	1991.12
	1.300E+001						
Ni-63	1		N	Y	Y	1.200E+000	1992.12
	1.200E+000						
Ni-63	1		N	Y	Y	1.200E+000	1994.12
	1.200E+000						
Ni-63	1		N	Y	Y	3.000E-001	1995.12
	3.000E-001						
Ni-63	1		N	Y	Y	1.200E+000	1998.12
	1.200E+000						
Pu-239	719		N	Y	N	5.100E+001	1989.12
	5.100E+001						
Pu-239	54838		N	Y	Y	6.700E+002	2003.12
	6.700E+002						
Pu-239		5	N	Y	N	3.800E+002	1989.01
		3.800E+002					

Site (Data) : RWF Ekores

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Pu-239	2		N	Y	N	5.800E-001	1989.01
	5.800E-001						
Ra-226	541683		N	Y	N	3.300E+001	1989.01
	3.300E+001						
Ra-226	419	5	N	Y	Y	3.620E+001	
	1.200E+000	3.500E+001					

Site (Structure) : Gomel-30

Country: BELARUS

Reporting Year: 2007

Full Name:

Location: Rechitsa region of Gomel province

Description:

Official Website:

License Holder(s): Ministry of Internal Affairs

Waste management facilities that are located at this site:

Facility:	Gomel-30		
Description:	Bore-hole repository		
Disposal part of facility Gomel-30			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	No		
List UMMT?	No		
Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	12	Capacity planned (m3):	12
Depth (m):	7	Host medium:	sedimentary (other)
Phase Name	Start Year	End Year	Estimate
construction	1963	1963	False
operation		1987	False

Site (Structure) : Kolosovo

Country: BELARUS

Reporting Year: 2007

Full Name:

Location: Stolbtsy region of Minsk province

Description:

Official Website:

License Holder(s): Ministry of Defense

Waste management facilities that are located at this site:

Facility:	Kolosovo		
Description:	Bore-hole repository		
Disposal part of facility			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
LILW-SL	No	No	
LILW-LL	No	No	
HLW	No	No	
List SRS?	#Error		
List UMMT?	#Error		
Type:			
Facility is modular?	#Error		
Depth (m):		Host medium:	
Phase Name	Start Year	End Year	Estimate

Site (Structure) : Chechersk

Country: BELARUS

Reporting Year: 2007

Full Name: Chechersk near surface repository

Location: Chechersk region of Gomel province

Description:

Official Website:

License Holder(s): Republican Specialized Unitary Enterprise "Polesie"

Comment **# 17426: Site Chechersk Data**

Due to the fact that at the Site Chechersk waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Site (Structure) : Chechersk

Country: BELARUS

Reporting Year: 2007

Facility:	Shepetov.
Description:	Decontamination waste repository of the second type - DWR-II "Shepetovichi"

Disposal part of facility Shepetov.

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	Yes

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	30000	Capacity planned (m3):	30000

Depth (m):	3	Host medium:	sedimentary (sand)
------------	---	--------------	--------------------

Phase Name	Start Year	End Year	Estimate
construction		1991	False
commissioning	1991	1991	False
operation	1991		False

Site (Data) : Chechersk

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Chechersk

Full Name: Chechersk near surface repository

Inventory Reporting Date: December 2007

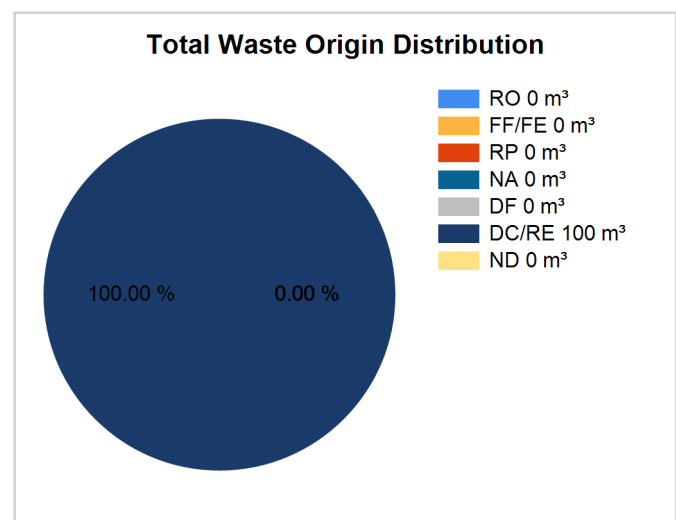
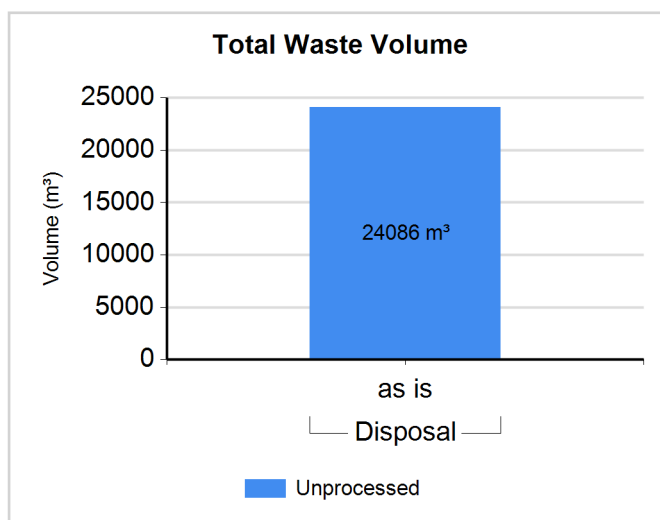
Waste Matrix Used: ChernDW

Comment # 17426: Site Chechersk Data

Due to the fact that at the Site Chechersk waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Shepetov.	N	N	24086.000	24086.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Complex

Country: BELARUS

Reporting Year: 2007

Full Name: Complex on conditioning decontamination waste

Location: 16, Fedyuninskogo str.
Gomel

Description:

Official Website:

License Holder(s): Republican Specialized Unitary Enterprise "Polesie"

Waste management facilities that are located at this site:

Facility:	Complex		
Description:	A facility for immobilization of waste generated in the process of decontamination of ventilation equipment, which was polluted as a result of Chernobyl Accident		
Processing part of facility	Complex		
The following shows processing status for waste classes and SRS.			
Waste Class	Actual	Planned	
DWT	No	No	
DWI	No	No	
Type:	Treatment, Conditioning		
Year opened:	0		

Site (Data) : Complex

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Complex

Full Name: Complex on conditioning decontamination waste

Inventory Reporting Date: December 2007

Waste Matrix Used: ChernDW

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination	N	N	Same	N
Evaporation	N	Y	Same	N
Filtration	N	Y	Same	N
Organic Destruction	N	Y	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	Y	Same	N

Site (Structure) : Khoiniki

Country: BELARUS

Reporting Year: 2007

Full Name: Khoiniki near surface repository

Location: Khoiniki region of Gomel province

Description:

Official Website:

License Holder(s): Republican Specialized Unitary Enterprise "Polesie"

Waste management facilities that are located at this site:

Facility:	Babchin-3		
Description:	Decontamination waste repository of the second type - DWR-II "Babchin-3"		
Disposal part of facility Babchin-3			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
DWT	Yes	Yes	
DWI	No	No	
List SRS?	No		
List UMMT?	No		
Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	30000	Capacity planned (m3):	30000
Depth (m):		Host medium:	sedimentary (sand)
Phase Name	Start Year	End Year	Estimate
construction		1986	True
commissioning	1986	1986	True
operation	1986		True

Site (Data) : Khoiniki

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Khoiniki

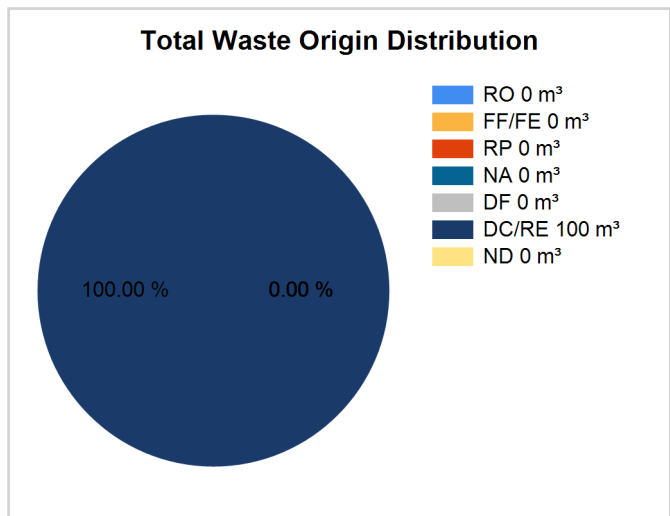
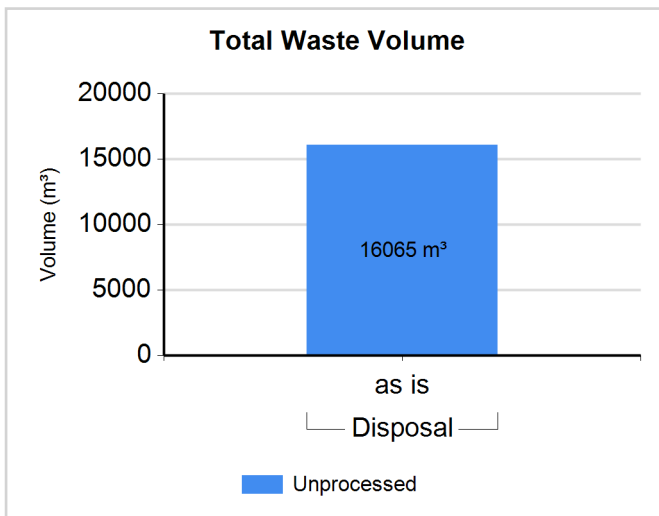
Full Name: Khoiniki near surface repository

Inventory Reporting Date: December 2007

Waste Matrix Used: ChernDW

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Babchin-3	N	N	16065.000	16065.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Narovlja

Country: BELARUS

Reporting Year: 2007

Full Name: Narovlja near surface repository

Location: Narovlja region of Gomel province

Description:

Official Website:

License Holder(s): Republican Specialized Unitary Enterprise "Polesie"

Waste management facilities that are located at this site:

Facility:	Khatki		
Description:	Decontamination waste repository of the first type - DWR-I "Khatki"		
Disposal part of facility			
Khatki			
The following shows disposal status for waste classes and SRS.			
Waste Class	Actual	Planned	
DWT	Yes	Yes	
DWI	No	No	
List SRS?	No		
List UMMT?	No		
Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	540	Capacity planned (m3):	540
Depth (m):	4	Host medium:	sedimentary rock (plastic clay)
Phase Name	Start Year	End Year	Estimate
design	1990	1991	False
construction	1991	1991	False
commissioning	1992	1992	False
operation	1992		False

Site (Data) : Narovlja

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Narovlja

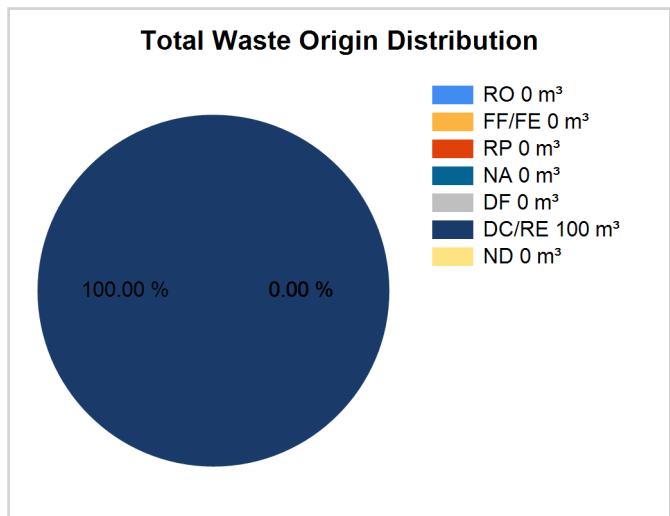
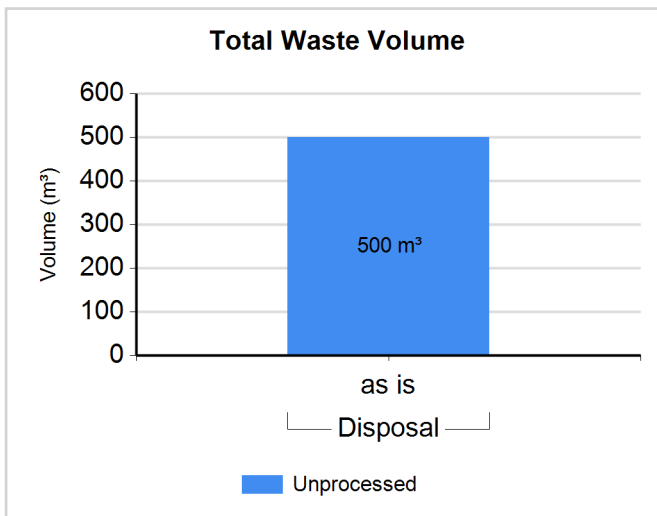
Full Name: Narovlja near surface repository

Inventory Reporting Date: December 2007

Waste Matrix Used: ChernDW

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Khatki	N	N	500.000	500.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Vetka

Country: BELARUS

Reporting Year: 2007

Full Name: Vetka near surface repositories

Location: Vetka region of Gomel province

Description:

Official Website:

License Holder(s): Republican Specialized Unitary Enterprise "Polesie"

Comment # 17425: Site Vetka Data

Due to the fact that at the Site Vetka waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Facility:	Podkamene
Description:	Decontamination waste repository of the second type - DWR-II "Podkamene"

Site (Structure) : Vetka

Country: BELARUS

Reporting Year: 2007

Disposal part of facility **Podkamene**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	30000	Capacity planned (m3):	30000

Depth (m):	3	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
construction		1994	False
commissioning	1994	1994	False
operation	1994		False

Site (Structure) : Vetka

Country: BELARUS

Reporting Year: 2007

Facility:	Rechki
Description:	Decontamination waste repository of the second type - DWR-II "Rechki"

Disposal part of facility Rechki

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	21965	Capacity planned (m3):	21965

Depth (m):	3	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
construction		1991	False
commissioning	1991	1991	False
operation	1991		False

Site (Data) : Vetka

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Vetka

Full Name: Vetka near surface repositories

Inventory Reporting Date: December 2007

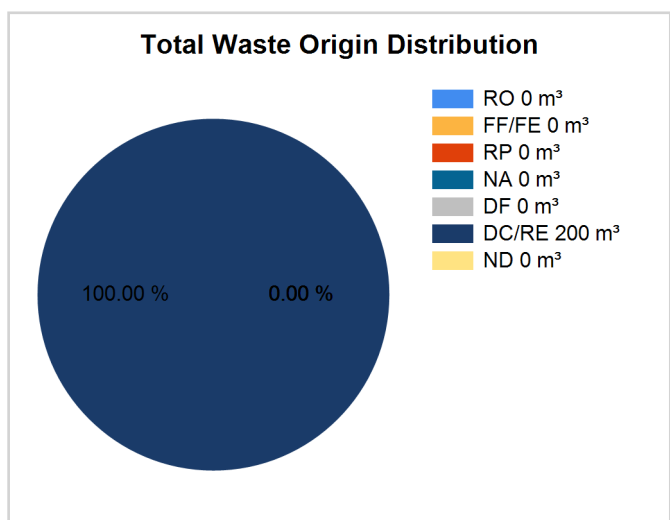
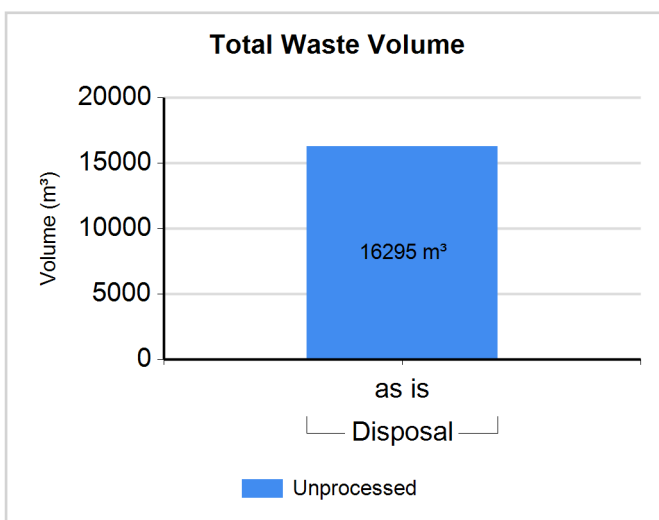
Waste Matrix Used: ChernDW

Comment # 17425: Site Vetka Data

Due to the fact that at the Site Vetka waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Podkamene	N	N	6073.000	6073.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00
DWT	Disposal / Rechki	N	N	10222.000	10222.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Cherikov

Country: BELARUS

Reporting Year: 2007

Full Name: Cherikov near surface repository

Location: Cherikov region of Mogilev province

Description:

Official Website:

License Holder(s): Republican Unitary Specialized Enterprise "Radon"

Comment **# 17427: Site Cherikov**

Due to the fact that at the Site Cherikov waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Site (Structure) : Cherikov

Country: BELARUS

Reporting Year: 2007

Facility:	Lysovka
Description:	Decontamination waste repository of the second type - DWR-II "Lysovka"

Disposal part of facility Lysovka

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	52000	Capacity planned (m3):	52000

Depth (m):	4	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
site selection	1986	1986	False
design	1986	1987	False
construction	1987	1987	False
commissioning	1987	1987	False
operation	1992		False

Site (Data) : Cherikov

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Cherikov

Full Name: Cherikov near surface repository

Inventory Reporting Date: December 2007

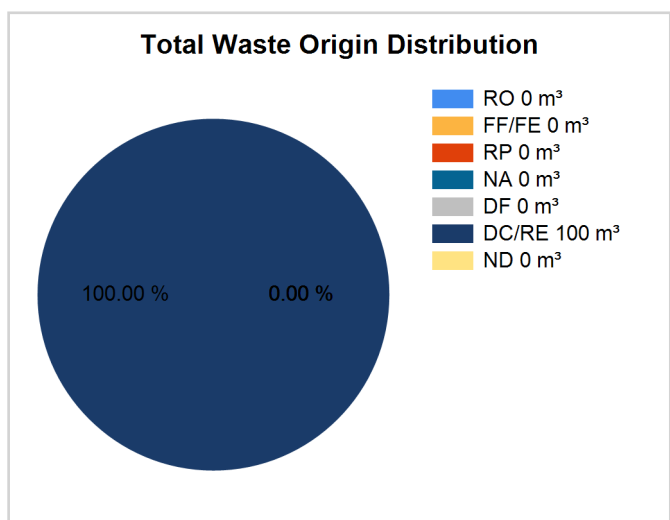
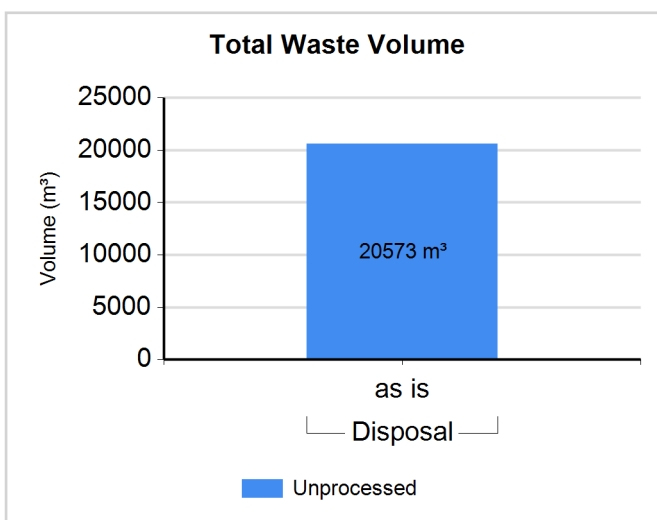
Waste Matrix Used: ChernDW

Comment # 17427: Site Cherikov

Due to the fact that at the Site Cherikov waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Lysovka	N	Y	20573.000	20573.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Kostyukov.

Country: BELARUS

Reporting Year: 2007

Full Name: Kostyukovichi near surface repository

Location: Kostyukovichi region of Mogilev province

Description:

Official Website:

License Holder(s): Republican Unitary Specialized Enterprise "Radon"

Comment **# 17430: Site Kostyukovichi Data**

Due to the fact that at the Site Kostyukovichi waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Site (Structure) : Kostyukov.

Country: BELARUS

Reporting Year: 2007

Facility:	Kolodezsk.
Description:	Repository for disposal of decontamination waste (type 2) - DWR-2 "Kolodezskaja"

Disposal part of facility **Kolodezsk.**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	30000	Capacity planned (m3):	30000

Depth (m):	4	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
site selection	1986	1986	False
design	1986	1987	False
construction	1987	1987	False
commissioning	1987	1987	False
operation	1993		False

Site (Data) : Kostyukov.

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Kostyukov.

Full Name: Kostyukovichi near surface repository

Inventory Reporting Date: December 2007

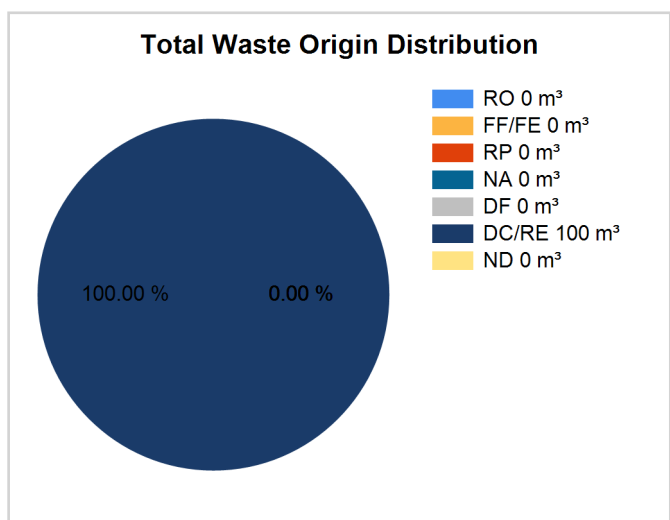
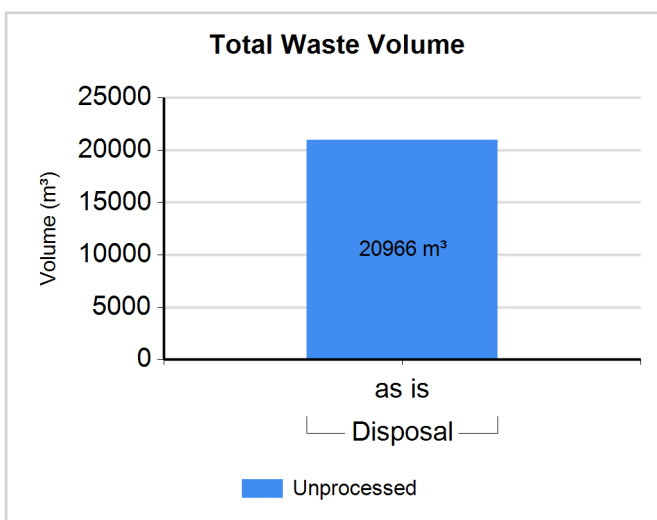
Waste Matrix Used: ChernDW

Comment # 17430: Site Kostyukovichi Data

Due to the fact that at the Site Kostyukovichi waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Kolodezsk.	N	Y	20966.000	20966.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Krasnopol.

Country: BELARUS

Reporting Year: 2007

Full Name: Krasnople near surface repository

Location: Krasnople region of Mogilev province

Description:

Official Website:

License Holder(s): Republican Unitary Specialized Enterprise "Radon"

Comment **# 17431: Site Krasnopolie Data**

Due to the fact that at the Site Krasnopolie waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Site (Structure) : Krasnopol.

Country: BELARUS

Reporting Year: 2007

Facility:	Gatskovic.
Description:	Decontamination waste repository of the second type - DWR-II "Gatskovichi"

Disposal part of facility Gatskovic.

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	30000	Capacity planned (m3):	30000

Depth (m):	4	Host medium:	sedimentary (other)
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Phase Name	Start Year	End Year	Estimate
site selection	1986	1986	False
design	1986	1987	False
construction	1987	1987	False
commissioning	1987	1987	False
operation	1991		False

Site (Data) : Krasnopol.

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Krasnopol.

Full Name: Krasnopol near surface repository

Inventory Reporting Date: December 2007

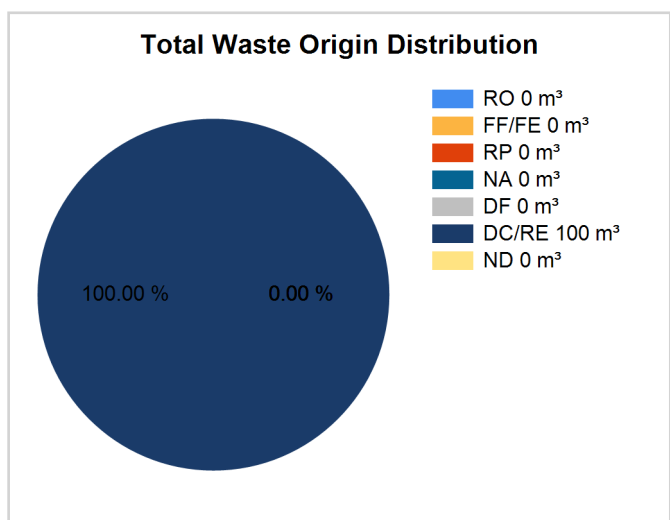
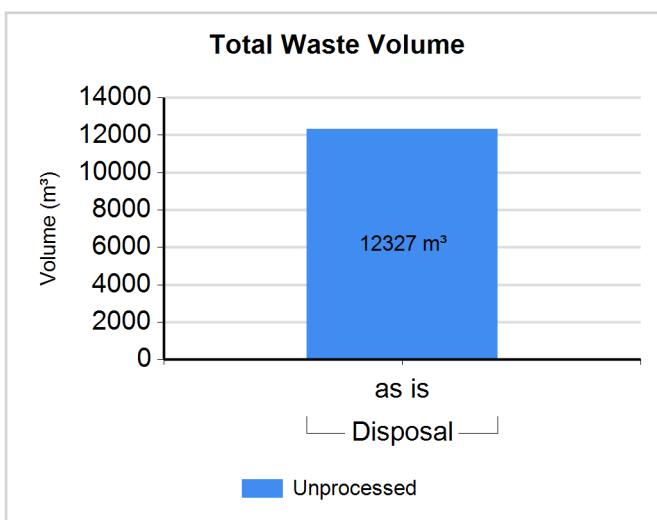
Waste Matrix Used: ChernDW

Comment # 17431: Site Krasnopolie Data

Due to the fact that at the Site Krasnopolie waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Gatskovic.	N	Y	12327.000	12327.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Site (Structure) : Slavgorod

Country: BELARUS

Reporting Year: 2007

Full Name: Slavgorod near surface repository

Location: Slavgorod region of Mogilev province

Description:

Official Website:

License Holder(s): Republican Unitary Specialized Enterprise "Radon"

Comment **# 17432: Site Slavgorod Data**

Due to the fact that at the Site Slavgorod waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

Waste management facilities that are located at this site:

Site (Structure) : Slavgorod

Country: BELARUS

Reporting Year: 2007

Facility:	Kulikovka
Description:	Decontamination waste repository of the second type - DWR-II "Kulikovka"

Disposal part of facility Kulikovka

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
DWT	Yes	Yes
DWI	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	38000	Capacity planned (m3):	38000

Depth (m):	4	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
site selection	1986	1986	False
design	1986	1987	False
construction	1987	1987	False
commissioning	1987	1987	False
operation	1993		False

Site (Data) : Slavgorod

Stock of waste as at December 2007

Country: BELARUS

Reporting Year: 2007

Site Name: Slavgorod

Full Name: Slavgorod near surface repository

Inventory Reporting Date: December 2007

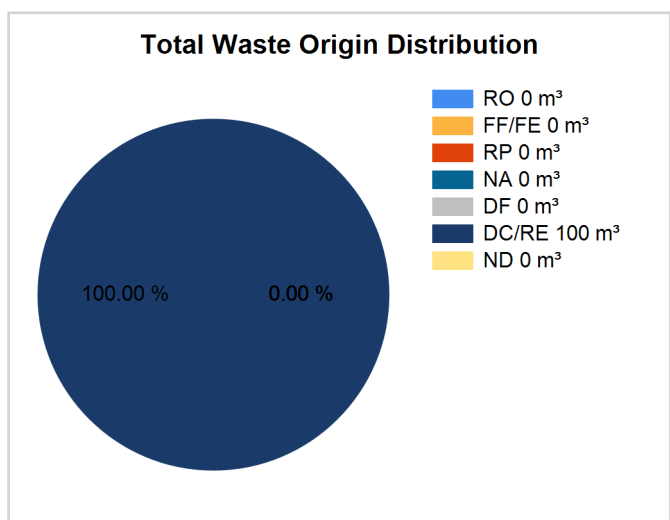
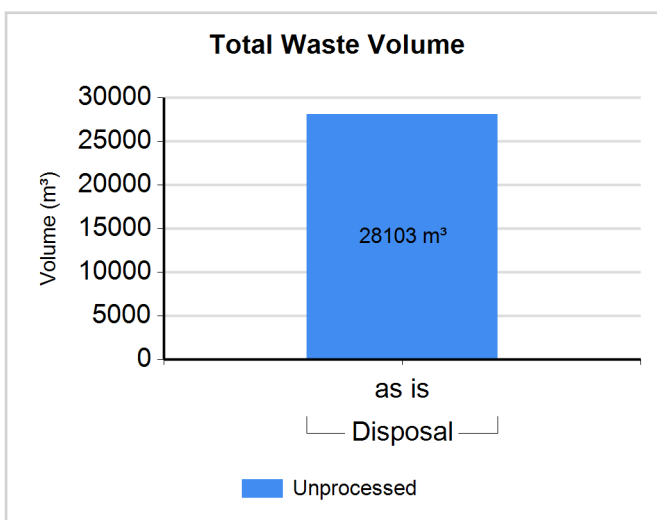
Waste Matrix Used: ChernDW

Comment # 17432: Site Slavgorod Data

Due to the fact that at the Site Slavgorod waste inventory information is available only in kilograms not in cubic meters, waste data is calculated for material density 1500 kilograms per cubic meter.

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: DWT

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
DWT	Disposal / Kulikovka	N	Y	28103.000	28103.000	0.00	0.00	0.00	0.00	0.00	100.00	0.00

Regulators

Country: BELARUS

Reporting Year: 2007

Name:	Promatom
Full Name:	Department for Regulation of Industrial and Nuclear Safety of the Ministry for Emergency Situations of the Republic of Belarus(Promatomnadzor)
Divison:	Division for Supervision and Regulation of Nuclear and Radiation Safety
City or Town:	Minsk
Main Website:	

Name:	RCHE
Full Name:	Republican Center of Hygiene and Epidemiological Service under Ministry of Health
Divison:	Division of Radiation Hygiene
City or Town:	Minsk
Main Website:	

Regulations / Laws

Country: BELARUS

Reporting Year: 2007

Name:	RadSafeLaw		
Title or Name:	Law on Radiation Safety of Public		
Reference Number:	122-3		
Date Promulgated or Proclaimed:	1/5/1998	Law	

Comment **# 183: Law on Radiation Protection of Population**

The Law defines the basis for legal regulation in the area of radiation protection of the public and is intended for creation of conditions ensuring protection of life and health of people against harmful effects of ionising radiation. It introduces the principles of norm-setting, justification and optimisation in ensuring radiation safety (article 3) and establishes basic hygienic standards (acceptable dose limits) of radiation exposure in the territory of Belarus which occurs as a result of using ionising radiation sources (article 8), in particular:

- the average annual effective dose for population is 0.001 Sv or the effective dose for life (70 years) is 0,07 Sv;
- the average annual effective dose for personnel is 0.02 Sv or the effective dose for the whole period of work (50 years) is 1 Sv

which corresponds to the international standards.

The Law defines:

- Functions of the state in the field of radiation safety;
- General requirements for radiation safety assurance, including those for radioactive waste and radiation emergency;
- Rights and duties of people and public associations in the field of radiation safety;
- Liability for non-observance of the requirements concerning radiation safety, including safety of radioactive waste management, etc.

In particular, the Law says that any activity involving the use and disposal of ionising radiation sources shall only be performed if prior authorisation is given by the competent state authority.

Name:	SanLaw		
Title or Name:	Law on Sanitary and Epidemic Well-being of Public		
Reference Number:	as amended 29.06.2003 #217-3		
Date Promulgated or Proclaimed:	10/23/1993	Law	

Comment **# 184: Law**

Law on Sanitary and Epidemic Well-being of Public defines the sphere of competence of state governing and control bodies, the responsibilities of economic entities in relation to observance of sanitary norms and regulations as well as undertaking of sanitary-hygienic and radiation protection measures. It says that production, use, storage, transportation of ionising radiation sources and disposal of radioactive substances are only allowed with prior authorisation of these kinds of activities obtained from state sanitary control authorities and other empowered bodies. All cases of violation of radiation safety standards in working with radioactive materials are subject to investigation with obligatory participation of executives exercising technical and sanitary control on behalf of the state

Regulations / Laws

Country: BELARUS

Reporting Year: 2007

Name:	ChernLaw	
Title or Name:	Law on Legal Status of the Territories Contaminated as a Result of the Accident at the Chernobyl Nuclear Power Plant	
Reference Number:	as amended 12.05.1999 #258-3	
Date Promulgated or Proclaimed:	11/19/1991	Law

Comment **# 186: Law on Legal Status**

Law on Legal Status of the Territories Contaminated as a Result of the Accident at the Chernobyl Nuclear Power Plant establishes the legal status of the territories of the Republic of Belarus contaminated as a result of the Chernobyl Accident, and is aimed at the reduction of radiation influence at the population and the ecological systems, at conducting recovery and protection arrangements, at the natural, economic and scientific resources conservation of these territories. The Law regulates the status of the radioactively contaminated territories, the conditions of residence and carrying out the economical, research and other activities on these territories.

Name:	AdmLaw	
Title or Name:	Administrative Code	
Reference Number:	47-3	
Date Promulgated or Proclaimed:	7/16/2001	Law

Comment **# 188: Administrative Code**

The Administrative Code has the following articles:
Article 268. Hiding or deliberate distortion of the information concerning with environmental contamination.
Article 278. Breach of safety rules while managing ecologically dangerous substances and waste.
Article 301. Breach of industrial and technical discipline rules or safety rules at the facilities concerned with the use of nuclear energy.
Article 322. Illicit acquisition, storage, sale or destruction of radioactive material.
Article 323. Theft of radioactive materials.
Article 324. Threat of the dangerous use of radioactive materials.
Article 325. Breach of rules of managing radioactive material.
Article 326. Breach of rules of radiation control.
Article 531 .Violation of safety rules of management of substances and waste posing danger to the environment - fine of up to 50 minimal salaries for citizens and 100 - for officials.
Article 1711 . Violation of radiation control rules - fine of up to 3 minimal salaries.

Name:	Post/L-nse	
Title or Name:	On licensing activities carried out by economic subjects	
Reference Number:	456	
Date Promulgated or Proclaimed:	8/21/1995	Regulation

Comment **# 191: The Ordinance on licensing**

The regulation "On licensing activities carried out by economic subjects" prescribes a license procedure for specific activities related to transportation, storage and disposal of radioactive waste.

Regulations / Laws

Country: BELARUS

Reporting Year: 2007

Name:	Post/Nadz	
Title or Name:	Ordinance "On the state control over safe conduct of work in industry and atomic power engineering"	
Reference Number:	572	
Date Promulgated or Proclaimed:	10/13/1995	Regulation

Comment **# 192: Ordinance "On the state control ..."**

The Ordinance "On the state control over safe conduct of work in industry and atomic power engineering" which has been approved by special Governmental resolution empowers Promatomnadzor to exercise state technical control over nuclear and radiation-hazardous production facilities, objects, installations using radioactive materials and radiation sources in their activities, and installations performing processing and disposal of radioactive waste.

Name:	OSP-2002	
Title or Name:	Basic Sanitary Rules for Radiation Safety (OSP-2002)	
Reference Number:	SanPiN 2.6.1.8-8-2002	
Date Promulgated or Proclaimed:	2/22/2002	Regulation

Comment **# 193: OSP 72/87**

OSP 72/87 is one of the normative documents of the former USSR which have been in force so far. It has a special section on management of solid and liquid radioactive waste.

New Basic radiation safety regulations for work with ionizing radiation sources are being drafted to meet the requirements of the new national standards (NRB-2000) and the international standards.

Name:	SPORO-2005	
Title or Name:	Sanitary Rules for Radioactive Waste Management (SPORO-2005)	
Reference Number:	SanPIN 2.6.6.11-2005	
Date Promulgated or Proclaimed:	6/1/2005	Regulation

Comment **# 194: SPORO-2005**

In June 2005 on the territory of the Republic of Belarus the new Sanitary Regulations of Radioactive Waste Management (SPORO-2005) have been put into force. They contain radioactive waste classification, main principles of radioactive waste management, radiation safety criteria for radioactive waste management, basic requirements for the safety of public and personnel at the stages of radioactive waste management (collection, storage, transport, processing, and disposal). These requirements don't apply to irradiated fuel and nuclear materials, industrial waste with high concentration of natural radionuclides, to the disposal of liquid waste in deep geological horizons (reservoir beds).

Regulations / Laws

Country: BELARUS

Reporting Year: 2007

Name:	SPOOD-2004		
Title or Name:	Sanitary Rules for Chernobyl NPP Decontamination Waste Management (SPOOD-2004)		
Reference Number:	SanPIN 2.6.6.8-8-2004		
Date Promulgated or Proclaimed:	11/23/2004	Regulation	

Comment **# 195: SPOOD-2004**

SPOOD-2004 were designed for regulation of a 'special' group of waste (ChernDW) which are formed as a result of work to eliminate the consequences of the Chernobyl accident.

Depending on specific activity or surface contamination of decontamination waste as well as formation history solid decontamination waste is disposed in DFDW.

According to engineering structure DRDW are divided into three categories:

DFDW-I is a special engineering structure intended for disposal of decontamination waste with the specific activity more than 100 kBq/kg according on Cs-137 to ensure their isolation using special engineering barriers, hydrotechnical measures, and permanent system of radiation control.

DFDW-II is near-surface engineering structure with clay bottoms intended for disposal of decontamination waste with the specific activity from 1 kBq/kg to 100 kBq/kg according on Cs-137.

DFDW-III are facilities formed as temporary units while mass decontamination of inhabited localities carried out by civil defence forces in Gomel Region (1986-1989).

According to national legislation only decontamination waste of Chernobyl origin of first and second type are considered as radioactive waste.

The SPOOD-2004 requirements were formulated taking into account waste peculiarities, situation developed on "emergency" storage sites, and predictive estimates of nuclides migration from those sites, based on the results of radioecological monitoring.

The SPOOD-2004 contains regulations on waste collection, temporary storage, transportation, inventory taking, radiological and technical control for all stages of handling this waste category. Measures for individual protection of personnel are also covered.

Name:	NRB-2000		
Title or Name:	Basic Radiation Safety Standards (NRB-2000)		
Reference Number:	GN 2.6.1.8.-127-2000		
Date Promulgated or Proclaimed:	4/19/2000	Regulation	

Comment **# 196: NRB-2000**

New Radiation Safety Standards NRB - 2000 have been developed on the basis of the Russian standards NRB-1999 and the International Basic Safety Standards (IAEA Safety Series 115).

These standards represent the requirements for radiation safety of human in all conditions of influence of ionizing radiation of natural and man-caused origin, basic dose limits, acceptable levels of influence of ionizing radiation and other requirements for limitation of human's exposure.

Milestones

Country: BELARUS

Reporting Year: 2007

Start Year or Reference Year:	2000	End Year:	
Description of Milestone:			
<p>An advanced strategy for the Ekores facility reconstruction was developed due to great pressure of public opinion. The strategy states that the Ekores facility is regarded as the facility for long storage of waste, not for its disposal. All the wastes at the Ekores vaults should be identified, conditioned, packaged and labelled to assure that the waste storage conditions meet updated safety requirements.</p>			

Start Year or Reference Year:	1998	End Year:	2000
Description of Milestone:			
<p>A number of the Governmental normative acts were developed to create an adequate legal basis for safety radioactive waste management. The most important ones were the Law of the Republic of Belarus "On radiation safety of public" (1998) and the Governmental Resolution to amend the Regulation "On licensing activities carried out by economic subjects" (1999), which improved the authorisation regime for the activities involving management of radioactive waste.</p> <p>The Law 'On legal treatment of territories contaminated as a result of the Chernobyl NPP catastrophe' enacted in 1991 was appropriately amended and special Regulation 'Provisional sanitary rules for the management of decontamination waste of the Chernobyl origin' (SPOOD-98) were put in force.</p>			

Start Year or Reference Year:	1997	End Year:	
Description of Milestone:			
<p>The project for the second Ekores facility reconstruction was launched by Belarus Government. The design included construction of some new repositories for spent sources storage, vaults for radioactive waste disposal and premises for radioactive waste sorting and conditioning.</p>			

Start Year or Reference Year:	1992	End Year:	1995
Description of Milestone:			
<p>The national regulatory regime was set up, resulting in establishing adequate control and supervision for the management of all type waste, including "Chernobyl waste". Within framework of the State Chernobyl Program, examination and inventory-taking of the sites packed with Chernobyl waste were carried out .</p>			

Start Year or Reference Year:	1986	End Year:	1991
Description of Milestone:			
<p>Owing to contamination of the 23% of Belarus territory by Chernobyl fallout the tasks of safety management of so-called "Chernobyl wastes", generated in the course of clean-up, economic and other human activities in the contaminated territory became highly acute. The waste consisting of removed soil, roofing slate, boards, household articles, domestic garbage, structural elements was put into 82 interim storage sites, arranged mostly in 'natural' locations (ravines, sand pits, foundation pits, trenches, etc.)In this period eight repositories were constructed from type designs in the abandoned areas specially for Chernobyl waste storage</p>			

Milestones

Country: BELARUS

Reporting Year: 2007

Start Year or Reference Year:	1977	End Year:	1977
Description of Milestone:			
The first reconstruction of the Radioactive Waste management Facility under "Ekores" enterprise (RWF "Ekores") was completed. The site, which before reconstruction had consisted of 2 simple concrete lined trenches only, was provided with laundry for cloth decontamination, garage for transport vehicles, 2 below surface, reinforced concrete vaults for solid radioactive waste and 4 bore holes for spent sealed sources storage			

Policies

Country: BELARUS

Reporting Year: 2007

National Systems

Policy		(Yes;Partially;No)
Q14	Has your Country implemented a national policy for radioactive waste management?	Partially
Comment	# 204: Policy	
	Belarus has partly implemented a national policy for management and regulation of radioactive waste though the policy is not formalised in any single document. Radioactive waste management is performed in the framework of the overall state radiation safety infrastructure. On the whole, Belarus radioactive waste management system meets the requirements set forth in the IAEA document '111-S-1 «Establishing a National System for Radioactive Waste Management», although certain elements have not been adequately developed. In the first place, this concerns financing structure and the mechanism of allocation of resources needed for neutralization of waste arising from using sources in the national economy.	

Strategies		(Yes;Partially;No)
Q15	Has your country developed strategies to implement a national policy?	Partially
Comment	# 206: Strategy	
	A document, named "Strategy for Radioactive Waste Management in Belarus" has been approved by the National Commission on Radiation Protection and submitted to the Government for resolution. The document addresses main problematic issues in the field of radioactive management and is considered to be a basis for the development of a National Program of Radioactive Waste Management. The strategy provides for the following steps to be taken:	
	<ul style="list-style-type: none"> - preparation of legislative acts, including a basic law, revision and development of normative and technical documents with due regard to international standards; - development and implementation of the funding mechanism for the whole waste management cycle; - creation of a state data bank (register) containing characteristics of waste storage and disposal sites, including those for decontamination waste of Chernobyl origin; - rehabilitation of the Ecores disposal facility (safety analysis, introduction of modern technologies, segregation and packaging of waste retrieved from 'old' disposal sites) - development of new technologies; - construction of a new national waste disposal facility; - taking measures to ensure long-term safety of all the waste storage/disposal sites; 	

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	Partially
Q19	implemented a mechanism to identify existing and anticipated radioactive wastes	Partially
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	Partially
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	Partially
Q24	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	No
Q25	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

Policies

Country: BELARUS

Reporting Year: 2007

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	Complete
Q34	implement the licensing process	Complete
Q35	advise the government	Complete
Q37	identify an acceptable destination for the radioactive waste	Complete
Q114	comply with legal requirements	Complete

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

Policies

Country: BELARUS

Reporting Year: 2007

Disposal Facilities

Licensing		(Yes - All;Yes - Some;No)
Q53	Environmental Assessment (EA)	Yes - All
Q54	Environmental Impact Statement (EIS)	Yes - Some
Q55	Performance Assessment (PA)	Yes - Some
Q56	Quality Assurance (QA)	No
Q57	Safety Assessment (SA)	Yes - Some
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

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

Policies

Country: BELARUS

Reporting Year: 2007

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)?	Yes
Q115	If the answer was yes, are any registries used only for disused/spent SRS?	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)?	No
Q100	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	Yes
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?	Yes
Q103	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	Yes

Country: BELARUS

Reporting Year: 2007

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

Comment **# 207: Waste import regulation**

Law «On the legal regime of the territories contaminated as a result of the Chernobyl NPP accident» prohibits acceptance of radioactive waste from abroad except of the waste resulting from the services rendered to Belarus by the states under contractual obligations.

Spent Fuel		(Yes;No)
Q105	Does your Country have laws or Regulations restricting either the import or export of spent fuel?	No

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?	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

Future Outlook

Country: BELARUS

Reporting Year: 2007

Data not available.

Future Outlook

Country: BELARUS

Reporting Year: 2007

Data not available.

Future Outlook

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