



**Country Waste Profile Report for
FINLAND
Reporting Year: 2010**

*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: FINLAND

Reporting Year: 2010

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: No

Description: The Agency's standard matrix

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

Waste Class Matrix: **FIN_RADW**

Yes

Description: Reactor wastes include solid and liquid waste arising from the controlled area of a nuclear power plant, see Comment #104. The portion of ILW is overestimated, especially what comes to disposed reactor waste.

Waste Class Name	Distribution %		
	LILW-SL	LILW-LL	HLW
reactor waste	99.0	1.0	0.0
spent fuel	0.0	0.0	100.0

Comment **# 104: Basis of the classification for reactor wastes**

The classification of reactor wastes in Finland is given in the Safety Guide YVL 8.3, where the reactor wastes are divided into low level and intermediate level waste categories (<http://www.edilex.fi/stuklex/en/lainsaadanto/saannosto/YVL8-3>). The boundary between LLW and ILW is 1 MBq/kg. In the definition of the boundary value the further handling of the waste is taken into account (radiation protection and selection of the disposal facility). The boundary value is not in accordance with GSG-1. It can be estimated that when using the definitions from GSG-1, the amount of ILW is approximately 1 % of the waste volume. ILW is mainly activated metal waste.

According to national laws, spent fuel is classified as waste but is not reported here.

Waste Class Matrix: **FIN_RADW2**

Yes

Description:

Waste Class Name	Distribution %		
	LILW-SL	LILW-LL	HLW
LILW	100.0	0.0	0.0
spent fuel	0.0	0.0	100.0

Waste Classification Schemes

Country: FINLAND

Reporting Year: 2010

Waste Class Matrix: **FIN_RADW3**

Yes

Description:

Waste Class Name	Distribution %		
	LILW-SL	LILW-LL	HLW
small user waste	90.0	10.0	0.0

Comment **# 335: Meaning of the term**

"Small user waste" term includes some SRS and some contaminated material. The small user wastes are managed by the government and so far kept in a cave. It is planned to dispose them together with reactor waste.

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

This country uses the following definitions:

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

Groups Overview

Country: FINLAND

Reporting Year: 2010

Reporting Group:	Lo_NPP
Inventory Reporting Date:	December 2010
Waste Matrix Used:	FIN_RADW
Description:	Loviisa NPP.

Site Name	Facility Name	Facilities Defined		
Loviisa	DT		storage	disposal
	LO1	processing	storage	
	LO2	processing	storage	
	NPP-Area		storage	

Reporting Group:	OI_NPP
Inventory Reporting Date:	December 2010
Waste Matrix Used:	FIN_RADW
Description:	Olkiluoto NPP

Site Name	Facility Name	Facilities Defined		
Olkiluoto	NPP-Area		storage	
	OL1	processing	storage	
	OL2	processing	storage	
	VLJ-KAJ			disposal
	VLJ-MAJ			disposal

Reporting Group:	Posiva
Inventory Reporting Date:	December 2010
Waste Matrix Used:	FIN_RADW
Description:	Posiva Oy, nuclear waste management company

Site Name	Facility Name	Facilities Defined		
Olkiluoto	SFdisposal			disposal

Groups Overview

Country: FINLAND

Reporting Year: 2010

Reporting Group:	STUK/TKO
Inventory Reporting Date:	December 2010
Waste Matrix Used:	FIN_RADW3
Description:	STUK's Research and Environmental surveillance (STUKin tutkimusosasto)

Site Name	Facility Name	Facilities Defined		
SSOW	SSOW		storage	

Reporting Group:	VTT/FIR
Inventory Reporting Date:	December 2010
Waste Matrix Used:	FIN_RADW2
Description:	Technical Research Centre of Finland

Site Name	Facility Name	Facilities Defined		
FIR	LILW-Proc	processing		
	LILW-Store		storage	
	SF storage		storage	

Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2010

Full Name: Loviisa NPP

Location: Loviisa, Finland

Description:

Official Website:

License Holder(s): Fortum Power and Heat Oy

Waste management facilities that are located at this site:

Facility:	DT
Description:	Disposal cave consists of tunnels designed with enough capacity for all reactor wastes from the power plant. The volume of packed waste to be disposed is estimated to be about 8740 m ³ .

Storage part of facility DT

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
reactor waste	Yes	Yes
spent fuel	No	No

List SRS?	No
List UMMT?	No

Capacity:	Disposal tunnels are designed with enough capacity for all reactor wastes from the power plant, in addition, tunnels can be used for storage purposes.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
DT-storage	cave	1998	No	No	No	No

Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2010

Disposal part of facility DT

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
reactor waste	Yes	Yes
spent fuel	No	No

List SRS?	No
List UMMT?	No

Type:	geological (cavern)		
Facility is modular?	Yes		
Capacity existing (m3):	2500	Capacity planned (m3):	8740

Depth (m):	110	Host medium:	crystalline rock (gneiss)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1980	1986	False
site selection	1980	1983	False
design	1983	1986	False
construction	1993	1997	False
commissioning	1997	1998	False
operation	1998		False

Comment **# 9656: Disposal Tunnels DT**

The first disposal tunnel is almost full in the end of 2004, and the second disposal tunnel is taken in use in 2005. Their capacity is about 2500 m3 and they are mainly meant for maintenance waste. A disposal room is also planned to be constructed in the future for waste immobilized in cement.

Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2010

Facility:	LO1					
Description:	processing and storage of reactor waste					
Storage part of facility LO1						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	activated components can be stored here at loading ponds etc.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
LO1	building	1977	No	No	No	No
Processing part of facility LO1						
The following shows processing status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	No	No				
spent fuel	No	No				
Type:	Treatment, Conditioning					
Year opened:	1977					

Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2010

Facility:	LO2					
Description:	processing and storage of reactor waste					
Storage part of facility LO2						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	activated components can be stored here at loading ponds etc.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
LO2	building	1980	No	No	No	No
Processing part of facility LO2						
The following shows processing status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	No	No				
spent fuel	No	No				
Type:	Treatment, Conditioning					
Year opened:	1980					

Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2010

Facility:	NPP-Area					
Description:	Nuclear power plant storage area					
Storage part of facility		NPP-Area				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	Yes	Yes				
List SRS?	No					
List UMMT?	No					
Capacity:	Nuclear power plant area can be used for storing purposes for waste that will not be disposed immediately, like liquid wastes waiting for cementation.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
NPPStorage	building	1977	No	No	No	No

Site (Data) : Loviisa

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Site Name: Loviisa

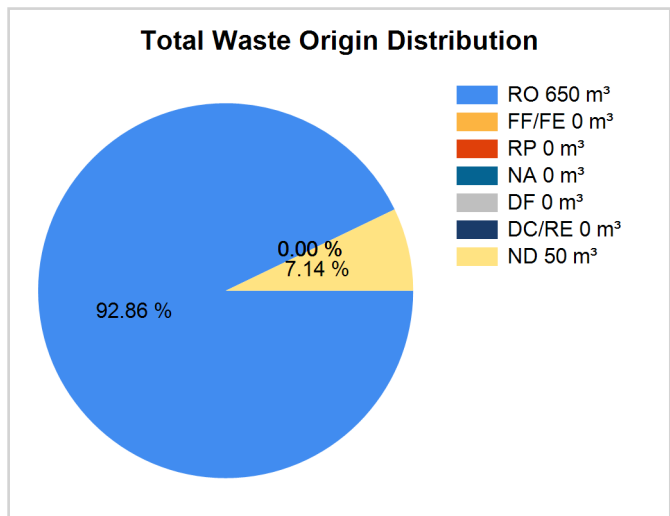
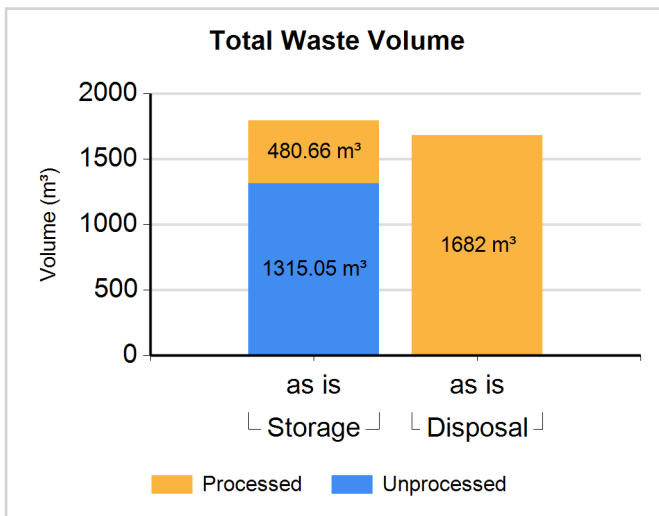
Full Name: Loviisa NPP

Inventory Reporting Date: December 2010

Waste Matrix Used: FIN_RADW

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: reactor waste

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
reactor waste	Storage / LO1	N	N	12.270	12.270	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / LO1	Y	N	32.600	32.600	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / LO2	N	N	12.180	12.180	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / LO2	Y	N	204.560	204.560	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / NPP-Area	N	N	1290.600	1290.600	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / NPP-Area	Y	N	243.500	243.500	50.00	0.00	0.00	0.00	0.00	0.00	50.00
reactor waste	Disposal / DT	Y	N	1682.000	1682.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Site (Data) : Loviisa

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction	N	N	Same	N
Decontamination	N	N	Same	N
Evaporation	N	N	Same	N
Radionuclide Separation	N	N	Same	N
Segregation/Sorting	N	N	Same	N
Size Reduction	N	N	Same	N

Processing - Conditioning method(s)

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

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Full Name: Olkiluoto NPP

Location: Eurajoki, Finland

Description:

Official Website:

License Holder(s): Teollisuuden Voima Oy

Waste management facilities that are located at this site:

Facility:	NPP-Area					
Description:	Power plant storage area					
Storage part of facility		NPP-Area				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	Yes	Yes				
List SRS?	No					
List UMMT?	No					
Capacity:	Nuclear power plant area can be used for storing purposes for waste that will not be disposed immediately.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
NPPStorage	building	2000	No	No	No	No

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Facility:	OL1					
Description:	processing and storage of reactor waste					
Storage part of facility						
OL1						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	activated components can be stored here at loading ponds etc.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
OL1	building	1978	No	No	No	No
Processing part of facility						
OL1						
The following shows processing status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	No	No				
spent fuel	No	No				
Type:	Treatment, Conditioning					
Year opened:	1978					

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Facility:	OL2					
Description:	processing and storage of reactor waste					
Storage part of facility						
OL2						
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	Yes	Yes				
spent fuel	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	activated components can be stored here at loading ponds etc.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
OL2	building	1980	No	No	No	No
Processing part of facility						
OL2						
The following shows processing status for waste classes and SRS.						
Waste Class	Actual	Planned				
reactor waste	No	No				
spent fuel	No	No				
Type:	Treatment, Conditioning					
Year opened:	1980					

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Facility:	VLJ-KAJ
Description:	KAJ silo in the VLJ-Cave repository. The KAJ silo is used to dispose of mainly the intermediate level waste (ILW) component of low and intermediate level (LILW) reactor waste

Disposal part of facility VLJ-KAJ

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
reactor waste	Yes	Yes
spent fuel	No	No

List SRS?	No
List UMMT?	No

Type:	geological (cavern)		
Facility is modular?	No		
Capacity existing (m3):	6400	Capacity planned (m3):	6400

Depth (m):	100	Host medium:	crystalline rock (granite)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1980	1986	False
site selection	1980	1983	False
design	1983	1986	False
construction	1988	1991	False
commissioning	1991	1991	False
operation	1992		False

Comment # 9711: Disposal Facility VLJ-KAJ

The total volume of disposed waste in MAJ- and KAJ-silos without overpackings will be about 8800 m3. The % capacity used reported in Framework is based on the volume of waste plus overpacks. However, the volume of waste disposed reported in Waste Data does not include overpack volumes. Therefore, if someone calculates % capacity used based on capacity of facility and volume of waste reported, the calculated value will not equal the reported % capacity used.

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Facility:	VLJ-MAJ
Description:	MAJ silo in the VLJ-Cave repository. The MAJ silo is used to dispose of mainly the low level waste (LLW) component of low and intermediate level (LILW) reactor waste

Disposal part of facility VLJ-MAJ

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
reactor waste	Yes	Yes
spent fuel	No	No

List SRS?	No
List UMMT?	No

Type:	geological (cavern)		
Facility is modular?	No		
Capacity existing (m3):	9100	Capacity planned (m3):	9100

Depth (m):	100	Host medium:	crystalline rock (granite)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1980	1986	False
site selection	1980	1983	False
design	1983	1986	False
construction	1988	1991	False
commissioning	1991	1991	False
operation	1992		False

Comment # 9710: Disposal Facility VLJ-MAJ

The total volume of disposed waste in MAJ- and KAJ-silos without overpackings will be about 8800 m3. The % capacity used reported in Framework is based on the volume of waste plus overpacks. However, the volume of waste disposed reported in Waste Data does not include overpack volumes. Therefore, if someone calculates % capacity used based on capacity of facility and volume of waste reported, the calculated value will not equal the reported % capacity used.

Site (Data) : Olkiluoto

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Site Name: Olkiluoto

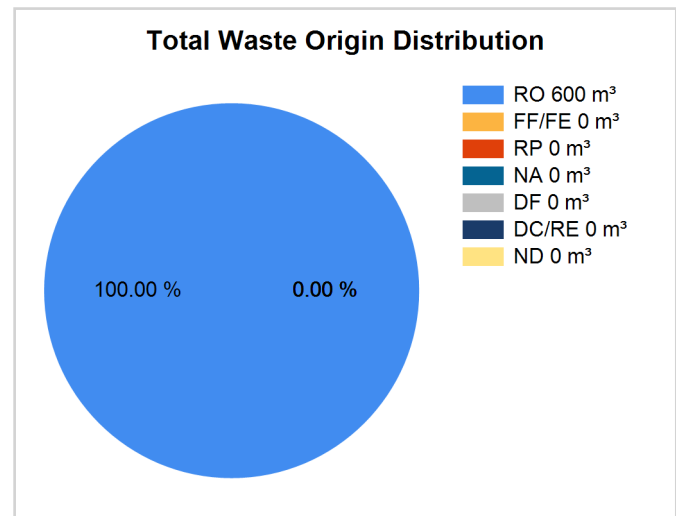
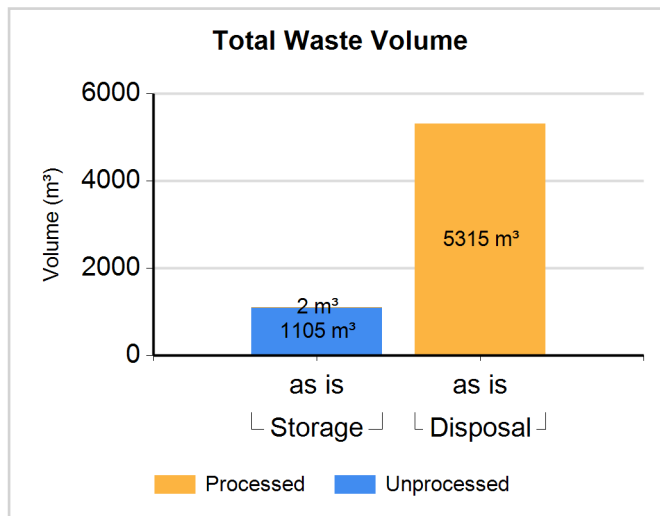
Full Name: Olkiluoto NPP

Inventory Reporting Date: December 2010

Waste Matrix Used: FIN_RADW

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: reactor waste

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
reactor waste	Storage / NPP-Area	N	Y	1052.000	1052.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / OL1	N	Y	27.000	27.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / OL1	Y	Y	2.000	2.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Storage / OL2	N	Y	26.000	26.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Disposal / VLJ-KAJ	Y	N	1777.000	1777.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
reactor waste	Disposal / VLJ-MAJ	Y	N	3538.000	3538.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Comment # 7176: The additional characteristics of the waste

Unprocessed: solid (non-dispersible)

Site (Data) : Olkiluoto

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction	N	N	Same	N
Decontamination	N	N	Same	N
Evaporation	N	N	Same	N
Filtration	N	N	Same	N
Ion Exchange	N	N	Same	N
Segregation/Sorting	N	N	Same	N
Size Reduction	N	N	Same	N
Wastewater Treatment	N	N	Same	N

Processing - Conditioning method(s)

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

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Full Name: Olkiluoto, the forthcoming repository for spent fuel

Location: Olkiluoto, Eurajoki municipality

Description:

Official Website:

License Holder(s): not licensed, the operator will be Posiva Oy.

Waste management facilities that are located at this site:

Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2010

Facility:	SFdisposal
Description:	All Finnish spent nuclear fuel is planned to be disposed at the Olkiluoto SF repository. The construction licence application will be current in 2012 and the operating licence application in 2020.

Disposal part of facility **SFdisposal**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
reactor waste	No	No
spent fuel	No	Yes

List SRS?	No
List UMMT?	No

Type:	geological (cavern)
Facility is modular?	No

Depth (m):	400-700	Host medium:	crystalline rock (gneiss)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1983	1985	False
site selection		2001	False
design		2003	False
construction	2012		True

Comment # 9657: Disposal Facility SFdisposal

Posiva has started grouting an underground rock laboratory, called ONKALO, in 2004. One of the main purposes of ONKALO is to verify the suitability of the site for disposal. ONKALO is also planned to be part of the forthcoming disposal repository.

Site (Data) : Olkiluoto

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Site Name: Olkiluoto

Full Name: Olkiluoto, the forthcoming repository for spent fuel

Inventory Reporting Date: December 2010

Waste Matrix Used: FIN_RADW

Site (Structure) : SSOW

Country: FINLAND

Reporting Year: 2010

Full Name: Storage for Stated Owned Waste

Location: Eurajoki, Finland

Description:

Official Website:

License Holder(s): The operating organisation for the SSOW is Research and Environmental Surveillance (STUK), and the authority is Nuclear Waste and Materials Regulation (STUK).

Waste management facilities that are located at this site:

Facility:	SSOW					
Description:	Storage of state owned waste (Pienjäteluola), located in the VLJ-cave.					
Storage part of facility		SSOW				
The following shows storage status for waste classes and SRS.						
Waste Class		Actual	Planned			
small user waste		Yes	Yes			
List SRS?	No					
List UMMT?	No					
Capacity:	Amount of packed waste can not be >100 m3. Non nuclear waste is accepted.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
SSOW	cave	1997	No	No	No	Yes

Site (Data) : SSOW

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Site Name: SSOW

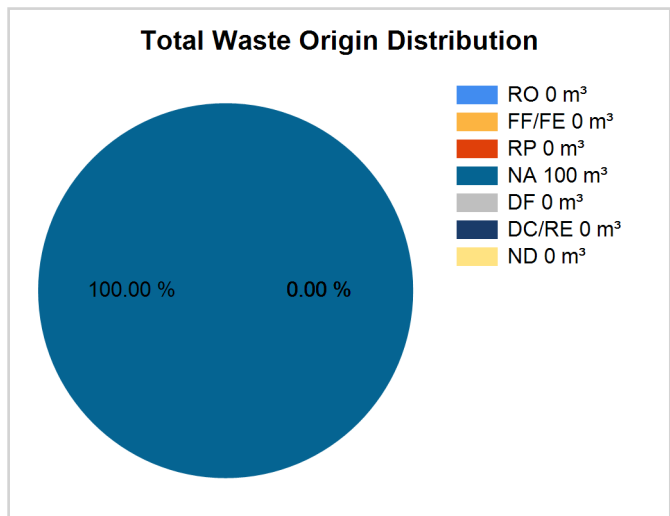
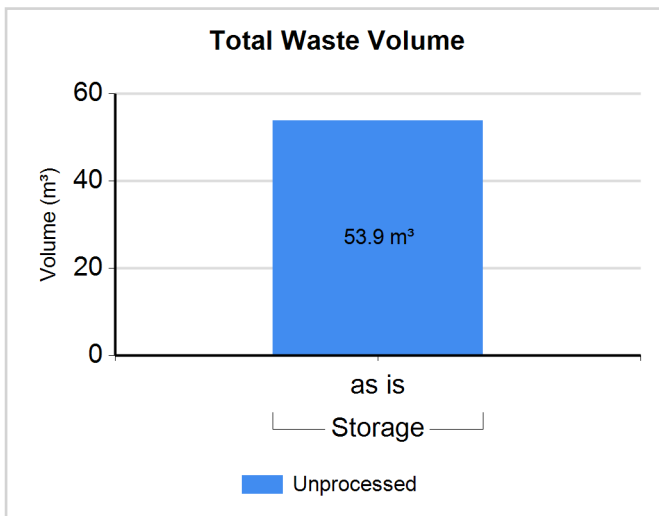
Full Name: Storage for Stated Owned Waste

Inventory Reporting Date: December 2010

Waste Matrix Used: FIN_RADW3

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: small user waste

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
small user waste	Storage / SSOW	N	N	53.900	53.900	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2010

Full Name: VTT FIR

Location: Espoo, Finland

Description:

Official Website:

License Holder(s): Technical Research Centre of Finland (Valtion Teknillinen Tutkimuskeskus)

Waste management facilities that are located at this site:

Facility:	LILW-Proc										
Description:	processing facility for LILW										
<p>Processing part of facility LILW-Proc</p> <p>The following shows processing status for waste classes and SRS.</p> <table border="1"> <thead> <tr> <th>Waste Class</th> <th>Actual</th> <th>Planned</th> </tr> </thead> <tbody> <tr> <td>LILW</td> <td>No</td> <td>No</td> </tr> <tr> <td>spent fuel</td> <td>No</td> <td>No</td> </tr> </tbody> </table>			Waste Class	Actual	Planned	LILW	No	No	spent fuel	No	No
Waste Class	Actual	Planned									
LILW	No	No									
spent fuel	No	No									
Type:	Treatment										
Year opened:	1962										

Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2010

Facility:	LILW-Store					
Description:	storage facility for LILW					
Storage part of facility		LILW-Store				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
LILW	Yes	Yes				
spent fuel	No	No				
List SRS?	No					
List UMMT?	No					
Capacity:	The facility stores all waste produced by the research reactor of FIR.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
Cellar	building	1962	No	No	No	No

Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2010

Facility:	SF storage					
Description:	Reactor hall storage for the spent fuel of the research reactor					
Storage part of facility		SF storage				
The following shows storage status for waste classes and SRS.						
Waste Class	Actual	Planned				
LILW	No	No				
spent fuel	Yes	Yes				
List SRS?	No					
List UMMT?	No					
Capacity:	Can contain all spent fuel of the research reactor.					
Types of Storage Units						
Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
Well	well	1962	No	No	No	No

Site (Data) : FIR

Stock of waste as at December 2010

Country: FINLAND

Reporting Year: 2010

Site Name: FIR

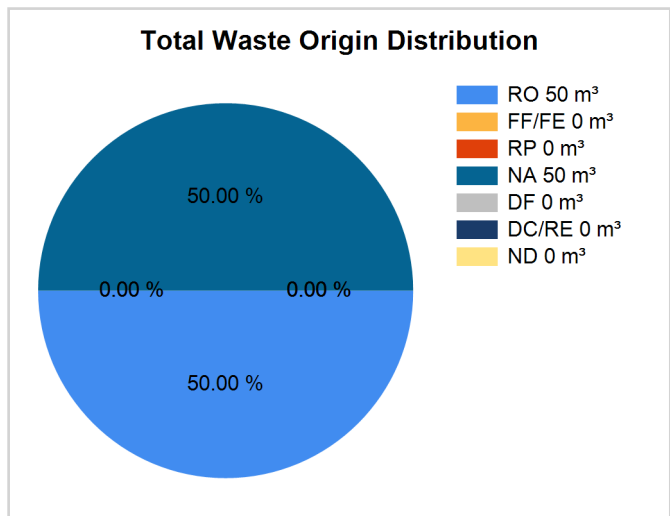
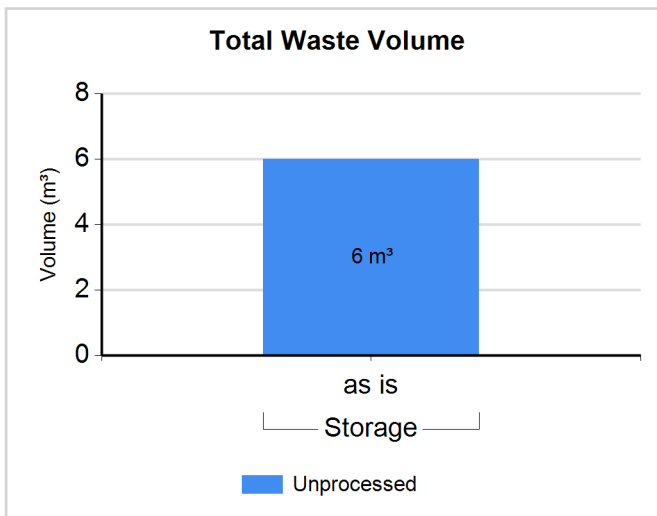
Full Name: VTT FIR

Inventory Reporting Date: December 2010

Waste Matrix Used: FIN_RADW2

Waste Inventory

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



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

Waste Class: LILW

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW	Storage / LILW-Store	N	N	6.000	6.000	50.00	0.00	0.00	50.00	0.00	0.00	0.00

Comment # 7178: The additional characteristics of the waste

Unprocessed: resin, solid (non-dispersible)

Processing - Treatment method(s)

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

Regulators

Country: FINLAND

Reporting Year: 2010

Name:	STUK
Full Name:	Radiation and nuclear Safety Authority
Divison:	Nuclear Waste and Materials Regulation
City or Town:	Helsinki
Main Website:	

Comment **# 7154: Wastes that are regulated by the Regulator**

Matrix FIN_RADW - reactor waste; Matrix FIN_RADW2 - LILW; Matrix FIN_RADW3 - small waste; and also spent fuel

Regulations / Laws

Country: FINLAND

Reporting Year: 2010

Name:	NE Act	
Title or Name:	Nuclear Energy Act (990/1987)	
Reference Number:	990/1987	
Date Promulgated or Proclaimed:	12/11/1988	Law

Comment **# 7155: Wastes that are regulated by the Law**

- Matrix FIN_RADW - reactor waste; Matrix FIN_RADW2 - LILW

Name:	NW Fund	
Title or Name:	Decree on the State Nuclear Waste Management Fund (162/1988)	
Reference Number:	165/1988	
Date Promulgated or Proclaimed:	2/12/1988	Law

Comment **# 7156: Wastes that are regulated by the Regulation**

- Matrix FIN_RADW - reactor waste; also SF

Name:	Rad Act	
Title or Name:	Radiation Act (592/1991)	
Reference Number:	592/1991	
Date Promulgated or Proclaimed:	3/27/1991	Law

Comment **# 7158: Wastes that are regulated by the Law**

Matrix FIN_RADW3 - small waste

Name:	Gov D 736	
Title or Name:	Government Decree on the safety of disposal of nuclear waste	
Reference Number:	736/2008	
Date Promulgated or Proclaimed:	11/27/2008	Law

Name:	Gov D 733	
Title or Name:	Government Decree on the Safety of Nuclear Power Plants	
Reference Number:	733/2008	
Date Promulgated or Proclaimed:	11/27/2008	Law

Regulations / Laws

Country: FINLAND

Reporting Year: 2010

Name:	YVL 8.1		
Title or Name:	Guide YVL 8.1, Disposal of low and intermediate level waste from the operation of nuclear power plants		
Reference Number:	YVL 8.1		
Date Promulgated or Proclaimed:	9/10/2003	Regulation	

Comment **# 7162: Wastes that are regulated by the Regulation**

Matrix FIN_RADW - reactor waste

Name:	YVL 8.2		
Title or Name:	Guide YVL 8.2, Clearance of nuclear waste and decommissioned nuclear facilities		
Reference Number:	YVL 8.2		
Date Promulgated or Proclaimed:	2/18/2008	Regulation	

Name:	YVL 8.3		
Title or Name:	Guide YVL 8.3, Treatment and storage of low and intermediate level waste at a nuclear power plant		
Reference Number:	YVL 8.3		
Date Promulgated or Proclaimed:	6/29/2005	Regulation	

Name:	YVL 8.4		
Title or Name:	Guide YVL 8.4, Long-term safety of disposal of spent nuclear fuel		
Reference Number:	YVL 8.4		
Date Promulgated or Proclaimed:	5/23/2001	Regulation	

Name:	ST 6.2		
Title or Name:	Guide ST 6.2, Radioactive wastes and discharges		
Reference Number:	ST 6.2		
Date Promulgated or Proclaimed:	7/1/1999	Regulation	

Comment **# 7166: Wastes that are regulated by the Regulation**

Matrix FIN_RADW3 - small waste

Regulations / Laws

Country: FINLAND

Reporting Year: 2010

Name:	ST 5.1	
Title or Name:	ST Guide 5.1 Radiation Safety of Sealed Sources and Equipment Containing Them	
Reference Number:	ST 5.1	
Date Promulgated or Proclaimed:	11/7/2007	Regulation

Comment # 7167: Wastes that are regulated by the Regulation

Matrix FIN_RADW3 - small waste

Name:	YVL 8.5	
Title or Name:	Guide YVL 8.5, Operational safety of a disposal facility for spent nuclear fuel	
Reference Number:	YVL 8.5	
Date Promulgated or Proclaimed:	12/23/2002	Regulation

Name:	STUK Act	
Title or Name:	Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983)	
Reference Number:	1069/1983	
Date Promulgated or Proclaimed:	12/22/1983	Law

Name:	ACNS Dec	
Title or Name:	Decree on Advisory Committee on Nuclear Safety (164/1988)	
Reference Number:	164/1988	
Date Promulgated or Proclaimed:	2/12/1988	Law

Name:	NE Dec	
Title or Name:	Nuclear Energy Decree (161/1988)	
Reference Number:	161/1988	
Date Promulgated or Proclaimed:	2/12/1988	Law

Name:	TPL Act	
Title or Name:	Act on Third Party Liability	
Reference Number:	484/1972	
Date Promulgated or Proclaimed:	6/8/1972	Law

Regulations / Laws

Country: FINLAND

Reporting Year: 2010

Name:	TPL Dec	
Title or Name:	Decree on the Implementation of Third Party Liability	
Reference Number:	785/1998	
Date Promulgated or Proclaimed:	10/30/1998	Law

Name:	Rad Dec	
Title or Name:	Radiation Decree	
Reference Number:	1512/1991	
Date Promulgated or Proclaimed:	12/20/1991	Law

Name:	STUK Dec	
Title or Name:	Decree on the Finnish Centre for Radiation and Nuclear Safety	
Reference Number:	618/1997	
Date Promulgated or Proclaimed:	6/27/1997	Law

Name:	ACNE Dec	
Title or Name:	Decree on Advisory Committee on Nuclear Energy	
Reference Number:	163/1988	
Date Promulgated or Proclaimed:	2/12/1988	Law

Name:	EIA Act	
Title or Name:	Act on the Environmental Impact Assessment Procedure	
Reference Number:	468/1994	
Date Promulgated or Proclaimed:	6/10/1996	Law

Name:	EIA Dec	
Title or Name:	Decree on Environmental Impact Assessment Procedure	
Reference Number:	792/1994	
Date Promulgated or Proclaimed:	8/25/1994	Law

Regulations / Laws

Country: FINLAND

Reporting Year: 2010

Name:	OGA Act		
Title or Name:	Act on the Openness of Government Activities		
Reference Number:	621/1999		
Date Promulgated or Proclaimed:	5/21/1999	Law	

Name:	PNRE Dec		
Title or Name:	Decree of Ministry of Interior Concerning Planning for Nuclear or Radiological Emergencies and for Informing the Public about Radiation Hazards		
Reference Number:	774/2001		
Date Promulgated or Proclaimed:	8/31/2001	Law	

Name:	DiP 1983		
Title or Name:	Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management		
Reference Number:	Decision in Principle of 10th November 1983		
Date Promulgated or Proclaimed:	11/10/1983	Regulation	

Name:	Gov R 165		
Title or Name:	Decision of the Government Concerning the Providing for Nuclear Waste Management Costs		
Reference Number:	165/1988		
Date Promulgated or Proclaimed:	2/18/1988	Regulation	

Name:	Gov D 734		
Title or Name:	Government Decree on the Security in the Use of Nuclear Energy		
Reference Number:	734/2008		
Date Promulgated or Proclaimed:	11/27/2008	Law	

Name:	Gov D 735		
Title or Name:	Government Decree on Emergency Response Arrangements at Nuclear Power Plants		
Reference Number:	735/2008		
Date Promulgated or Proclaimed:	11/27/2008	Law	

Milestones

Country: FINLAND

Reporting Year: 2010

Start Year or Reference Year:	2001	End Year:	2001
Description of Milestone:			
DiP and site selection for SF disposal.			
Start Year or Reference Year:	1998	End Year:	1998
Description of Milestone:			
1998 start of operation of Loviisa LILW repository.			
Start Year or Reference Year:	1992	End Year:	1992
Description of Milestone:			
1992 start of operation of Olkiluoto LILW repository.			

Policies

Country: FINLAND

Reporting Year: 2010

National Systems

Policy		(Yes;Partially;No)
Q14	Has your Country implemented a national policy for radioactive waste management?	Yes
Comment # 9661: Policies National Systems-Policy		
Ref. to Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management.		

Strategies		(Yes;Partially;No)
Q15	Has your country developed strategies to implement a national policy?	Yes
Comment # 9662: Policies National Systems-Strategies		
Ref. to Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management.		

Requirements		(Yes;Partially;No)
Q17	identified the parties involved in the different steps of radioactive waste management	Yes
Q18	specified a rational set of safety, radiological and environmental protection objectives	Yes
Q19	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
Q20	implemented controls over radioactive waste generation	Yes
Q21	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
Q22	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
Q23	implemented appropriate research and development to support the operational and regulatory needs	Yes
Q24	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
Q25	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Comment # 9663: Policies National Systems-Requirements

Ref. to Nuclear Energy Act (990/1987), Nuclear Energy Decree (161/1988), Decree on the State Nuclear Waste Management Fund (162/1988), Act on Third Party Liability (484/1972), Decree on the Implementation of Third Party Liability (486/1972), Radiation Act (592/1991), Radiation Decree (1512/1991), Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983) and Decree on the Finnish Centre for Radiation and Nuclear Safety (1618/1997).

Policies

Country: FINLAND

Reporting Year: 2010

	Responsibilities	(Complete;Incomplete)
Q28	establish and implement a legal framework for the management of radioactive waste	Complete
Q29	establish or designate a regulatory body that has the responsibility for carrying out the regulatory function with regard to safety and the protection of human health and the environment.	Complete
Q30	define the responsibilities of waste generators and operators of waste management facilities	Complete
Q31	provide for adequate resources	Complete
Q33	enforce compliance with regulatory requirements	Complete
Q34	implement the licensing process	Complete
Q35	advise the government	Complete
Q37	identify an acceptable destination for the radioactive waste	Complete
Q114	comply with legal requirements	Complete

Comment # 9664: Policies National Systems-Responsibilities

Ref. to Nuclear Energy Act (990/1987), Nuclear Energy Decree (161/1988), Decree on the State Nuclear Waste Management Fund (162/1988), Act on Third Party Liability (484/1972), Decree on the Implementation of Third Party Liability (486/1972), Radiation Act (592/1991), Radiation Decree (1512/1991), Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983) and Decree on the Finnish Centre for Radiation and Nuclear Safety (1618/1997).

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

Policies

Country: FINLAND

Reporting Year: 2010

Clearance		(Yes;No)
Q128	Does your country have "clearly defined clearance levels based on radiological criteria, with policy statements that material below those levels can be recycled or disposed of with non-radioactive wastes"?	Yes
Q129	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
Q130	Has your country ever used clearance levels to dispose of, reuse or recycle radioactive waste as non-radioactive waste or as a non-radioactive resource (excluding spent/disused sealed radioactive sources)?	Yes
Comment	# 9691: Policies National Systems-Clearance YVL 8.2 Guide.	

Disposal Facilities

Licensing		(Yes - All;Yes - Some;No)
Q53	Environmental Assessment (EA)	No
Q54	Environmental Impact Statement (EIS)	Yes - All
Q55	Performance Assessment (PA)	Yes - All
Q56	Quality Assurance (QA)	Yes - All
Q57	Safety Assessment (SA)	Yes - All
Q59	If Quality Assurance is part of your Country's current, waste disposal facility licensing policy, does the QA Program conform to international standards (such as the ISO9000 series)?	Yes - All
Comment	# 114: EIS is called Environmental Impact Assessment	
Comment	# 115: PA PA is part of the SA.	

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
Comment	# 9685: Policies Disposal Facilities-Operation Two operating disposal facilities for LILW exist. Regulatory guides include general criteria for waste packages to be disposed of. The FSAR's of the disposal facilities include waste package specifications which are to be approved by the regulator.	

Post-Closure		(Yes;No)
Q61	Does your Country have any written policies to address the maintenance of records that describe the design, location and inventory of waste disposal facilities?	Yes
Q62	If the answer to the previous question was YES, does your Country have any policies, laws or regulations that prescribe what records are to be maintained?	Yes
Q63	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Policies

Country: FINLAND

Reporting Year: 2010

Processing/Storage

Policies/Procedures		(Yes;No)
Q73	waste sorting/segregation	Yes
Q74	waste minimization	Yes
Q75	waste storage	Yes
Q76	processing and/or storing and/or disposing of nuclear fuel cycle waste separately from non-nuclear fuel cycle waste (also known as nuclear applications waste)	No
Q78	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

Implementation		(Yes;No)
Q80	In your Country are there any waste processing facilities at the same location where the waste is generated?	Yes
Q81	In your Country are there any centralized waste processing facilities?	No
Q82	In your Country are there any mobile waste processing facilities?	No

Comment # 116: mobile waste processing facility

Finland has a mobile waste processing facility (NURES) which is used only at the Loviisa NPP site.

Foreign		(Yes;No)
Q121	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	No
Q124	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Policies

Country: FINLAND

Reporting Year: 2010

Spent/Disused SRS

Registration		(Yes;No)
Q84	Is there a national level registry?	Yes
Q85	If answer was yes, is the registry used only for disused/spent SRS?	No
Q87	Are there regional-level registries (one or more)?	No
Q90	Are there local-level registries (one or more)?	No

Procedures		(Yes;No)
Q91	Does your Country have documented procedures in place to ensure that sealed radioactive sources (SRS) are transferred to secure facilities in a timely manner after their user declares them to be spent?	Yes

Comment # 117: Documented procedures
ST 5.1 Guide.

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

Comment # 9686: Policies Spent SRS-Agreements

Sealed sources are not manufactured in Finland but all are imported, thus the agreements are between Finnish users and foreign manufacturers.

Release / Disposal		(Yes;No)
Q99	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	Yes
Q100	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
Q101	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
Q102	Has your Country implemented dedicated disposal facilities for spent SRS?	No
Q103	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Comment # 118: Regulations for free-release SRS
ST 6.2 Guide.

Comment # 9687: Policies Spent SRS-Release / Disposal

Spent sealed sources with activity inventories below specified limits will be disposed of with LILW from NPPs.

Policies

Country: FINLAND

Reporting Year: 2010

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 # 9665: Policies Import-Export-Radioactive Waste

Also import/export of spent fuel is prohibited by the law.

Spent Fuel

(Yes;No)

Q105 Does your Country have laws or Regulations restricting either the import or export of spent fuel? Yes

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

Policies

Country: FINLAND

Reporting Year: 2010

Decommissioning

Funding		(Yes - All;Yes - Some;No)
Q111	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - All

Facilities		(Yes;No)
Q119	Does Your Country have any nuclear fuel cycle facilities?	Yes
Q120	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

Comment **# 9688: Policies Decommissioning-Facilities**

Nuclear fuel cycle facilities: FiR, NPPs and related spent fuel and waste management facilities.

Non-fuel cycle facilities: particle accelerators, radiochemical laboratories, hot cell for material testing

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

Comment **# 9689: Policies Decommissioning-Timeframe**

Time frames of decommission for nuclear fuel cycle facilities are included in periodically updated decommissioning plans, which are reviewed by the regulator.

Comment **# 9690: Policies Decommissioning-Timeframe**

For non nuclear fuel cycle facilities is applied case-by-case judgement.

Future Outlook

Country: FINLAND

Reporting Year: 2010

Data not available.

Future Outlook

Country: FINLAND

Reporting Year: 2010

Data not available.

Future Outlook

Country: FINLAND

Reporting Year: 2010

Data not available.

Future Outlook

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Data not available.

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Data not available.