Country Waste Profile Report for

SWEDEN

Reporting Year: 2008

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: SWEDEN Reporting Year: 2008

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: Yes

Description: The Agency's standard matrix

	Distribution %		
Waste Class Name	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

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

This country uses the IAEA standard definition:

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

Groups Overview

Country: SWEDEN Reporting Year: 2008

Reporting Group:	**CLAB**
Inventory Reporting Date:	December 2008
Waste Matrix Used:	IAEA Def.
Description:	Central Interim Storage for, mainly, spent nuclear fuel but also for activated components from NPPs

Site Name	Facility Name	Facilities Defined		
CLAB	CLAB		storage	

Reporting Group:	**NPP**
Inventory Reporting Date:	December 2008
Waste Matrix Used:	IAEA Def.
Description:	Nuclear Power Plants at Forsmark, Oskarshamn, Barseback and Ringhals

Site Name	Facility Name	Facilities Defined		
Barseback	Bit	processing		
	Cement	processing		
	Compaction	processing		
	Dewater	processing		
Forsmark	Bit	processing		
	Compaction	processing		
	FKA			disposal
	Solid	processing		
OKG	Cement	processing		
	Compaction	processing		
	Dewater	processing		
	OKG			disposal
	OKG		storage	
	Solid	processing		
Ringhals	Cement	processing		
	Compaction	processing		
	Ringhals			disposal
	Solid	processing		

Groups Overview

Country: SWEDEN Reporting Year: 2008

Reporting Group:	**Repository**
Inventory Reporting Date:	December 2008
Waste Matrix Used:	IAEA Def.
Description:	Facilities for disposal of LILW in underground cavities

Site Name	Facility Name	Facilities Defined		
SFL 3-5	SFL 3-5			disposal
SFR 1	SFR 1			disposal
SFR 3	SFR 3			disposal

Reporting Group:	**Studsvik**
Inventory Reporting Date:	December 2008
Waste Matrix Used:	IAEA Def.
Description:	Studsvik Research Center. The center collects and treats waste from all small users in Sweden.

Site Name	Facility Name	Facilities Defined		
Studsvik	Cement	processing		
	Compaction	processing		
	Hot cell	processing		
	Incin	processing		
	Melting	processing		
	Studsvik		storage	
	Studsvik			disposal

Site (Structure) : CLAB

Country: SWEDEN Reporting Year: 2008

Full Name: Central Interim Storage Facility for Spent Nuclear Fuel

Location: Co-located to the NPP 25 km north of Oskarshamn

Description:

Official Website:

License Holder(s): Swedish Nuclear Fuel and Waste management Co (SKB)

Waste management facilities that are located at this site:

Facility:	**CLAB**
Description:	Water filled concrete pools in excavated rock cavities. Mainly used for storage of spent nuclear fuel. Only a small part is used for LILW-LL. Data refer to the whole facility.

Storage part of facility **CLAB**

The following shows storage status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Capacity:	

Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
CLAB	pool	1985	No	No	No	No

Site (Data) : CLAB

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

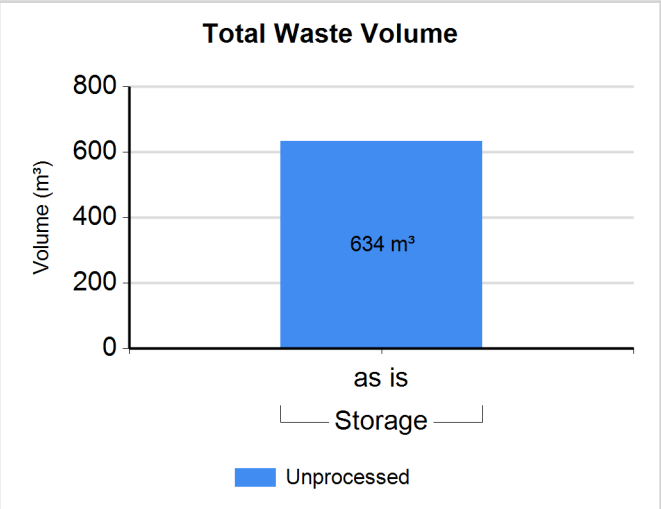
Site Name: **CLAB**

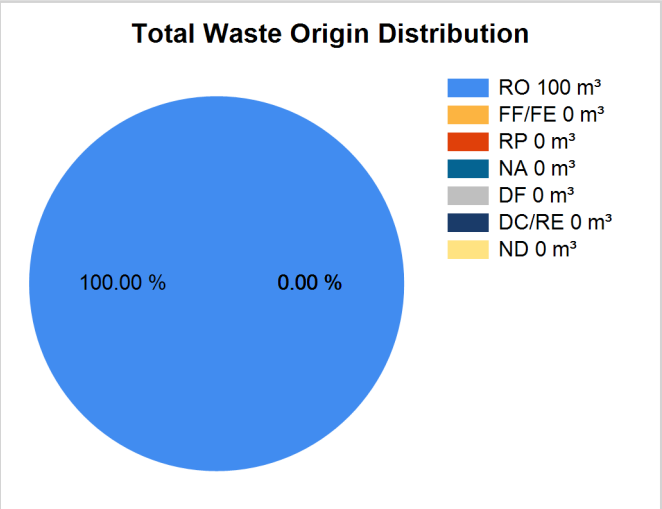
Full Name: Central Interim Storage Facility for Spent Nuclear Fuel

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-LL**

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-LL	Storage	N	N	634.000	634.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Site (Structure) : Barseback

Country: SWEDEN Reporting Year: 2008

Full Name: Barsebäck Nuclear Power Plant

Location: At the south coast outside the city of Malmö

Description:

Official Website:

License Holder(s): Barseback Kraft AB

Waste management facilities that are located at this site:

Facility:	**Bit**
Description:	Solidification of ion exchange resins in bitumen

Processing part of facility **Bit**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1980

Site (Structure) : Barseback

Country: SWEDEN Reporting Year: 2008

Facility:	**Cement**
Description:	Conditioning of ion exchange resins in cement

Processing part of facility **Cement**

The following shows processing status for waste classes and SRS.

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

Type:	Conditioning
Year opened:	0

Site (Structure) : Barseback

Country: SWEDEN Reporting Year: 2008

Facility:	**Compaction**
Description:	Compaction of low active scrap and trash

Processing part of facility **Compaction**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1980

Site (Structure) : Barseback

Country: SWEDEN Reporting Year: 2008

Facility:	**Dewater**
Description:	Dewatering ion exchange resins in waste container

Processing part of facility **Dewater**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1980

Site (Data) : Barseback

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

Site Name: **Barseback**

Full Name: Barsebäck Nuclear Power Plant

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

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

Comment **# 7605: dewatering**

Dewatering was not available as a treatment method in the NEWMDB's list of methods and, therefore, it is not indicated in the list of treatment methods selected for Barseback. Dewatering is a process/treatment method in which spent ion exchange resin is collected in a container (waste packaging) and the free water which comes with the resin is pumped away. The result is something which looks like clay. This package is the waste package ready for disposal.

Processing - Conditioning method(s)

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

Comment **# 7604: status of facilities**

As of the reporting date for the "2003 submission" (Dec 2003), the cementation facility was not yet in operation.

Site (Structure) : Forsmark

Country: SWEDEN Reporting Year: 2008

Full Name: Forsmark Nuclear Power Plant

Location: Forsmark 180 km north of Stockholm at the Baltic Sea

Description:

Official Website:

License Holder(s): Forsmark Kraftgrupp AB

Waste management facilities that are located at this site:

Facility:	**Bit**
Description:	Bituminisation of ion exchange resins

Processing part of facility **Bit**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1988

Site (Structure) : Forsmark

Country: SWEDEN Reporting Year: 2008

Facility:	**Compaction**
Description:	Compation of low active scrap and trash

Processing part of facility **Compaction**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1988

Site (Structure) : Forsmark

Country: SWEDEN Reporting Year: 2008

Facility:	**FKA**
Description:	Landfill for LILW with very low activity content. Activity content, total 100 GBq. Specific activity max 300 Bq/g and surface dose rate max 0.5 mSv/h

Disposal part of facility **FKA**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	42500	Capacity planned (m3):	42500

Depth (m):	0	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
operation	1989	2040	False

Site (Structure) : Forsmark

Country: SWEDEN Reporting Year: 2008

Facility:	**Solid**
Description:	Solid waste backfilled with cement in waste containers

Processing part of facility **Solid**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1986

Site (Data) : Forsmark

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

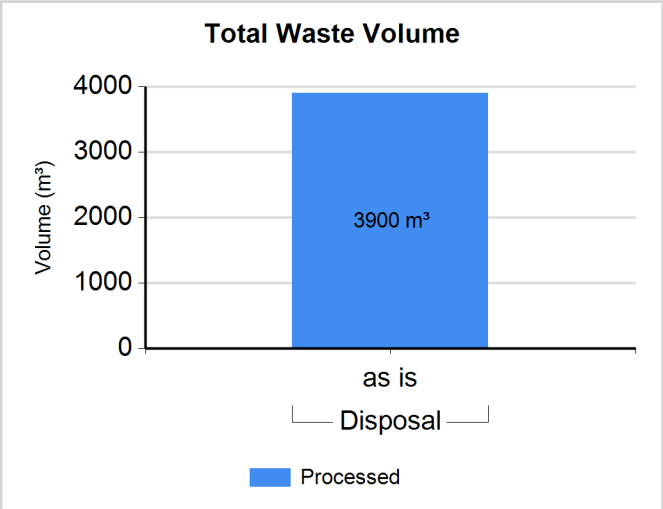
Site Name: **Forsmark**

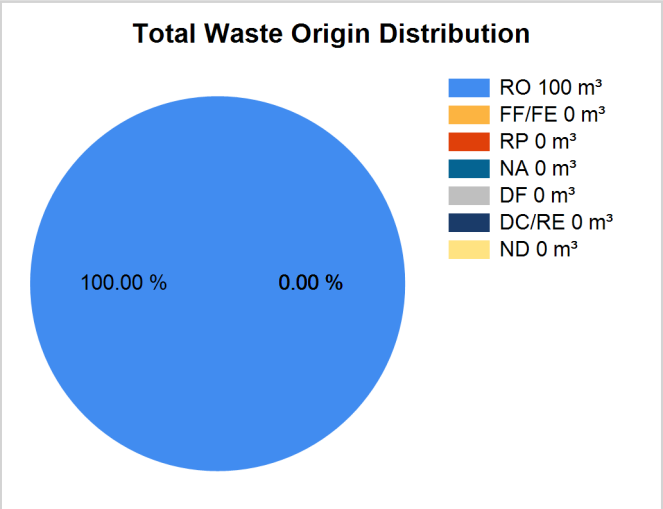
Full Name: Forsmark Nuclear Power Plant

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-SL**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Disposal	Y	N	3900.000	3900.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Full Name: OKG Nuclear Power Plant

Location: 25 km north of Oskarshamn on the east coast

Description:

Official Website:

License Holder(s): OKG AB

Waste management facilities that are located at this site:

Facility:	**Cement**
Description:	Cement solidification of ion exchange resins

Processing part of facility **Cement**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1972

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Facility:	**Compaction**
Description:	Compaction of scrap and trash with low activity contents

Processing part of facility **Compaction**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1972

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Facility:	**Dewater**
Description:	Dewatering of ion exchange resins

Processing part of facility **Dewater**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1980

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Facility:	**OKG**
Description:	Rock cavern for storage of LILW

Storage part of facility **OKG**

The following shows storage status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Capacity:	

Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
OKG	cave	1978	No	No	No	No

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Facility:	**OKG**
Description:	Landfill for LILW with very low activity content. Activity content, total 100 GBq (planned 300 GBq). Specific activity max 300 Bq/g and surface dose rate max 0.5 mSv/h

Disposal part of facility **OKG**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	7500	Capacity planned (m3):	16000

Depth (m):	0	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
operation	1987	2040	False

Site (Structure) : OKG

Country: SWEDEN Reporting Year: 2008

Facility:	**Solid**
Description:	Scrap and trash backfilled with cement in waste container

Processing part of facility **Solid**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1972

Site (Data) : OKG

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

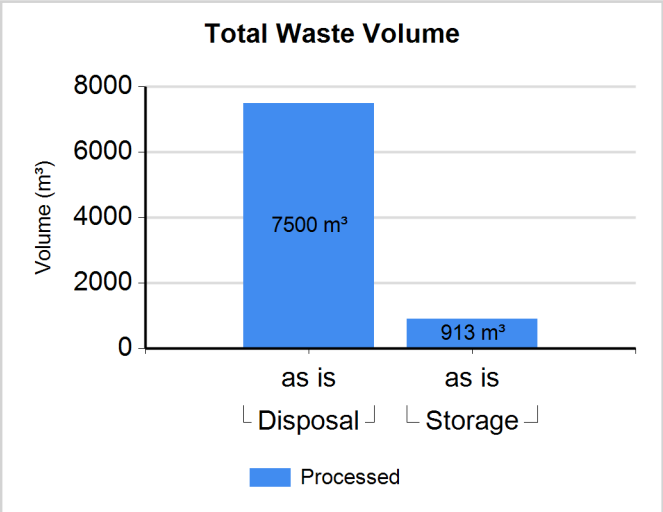
Site Name: **OKG**

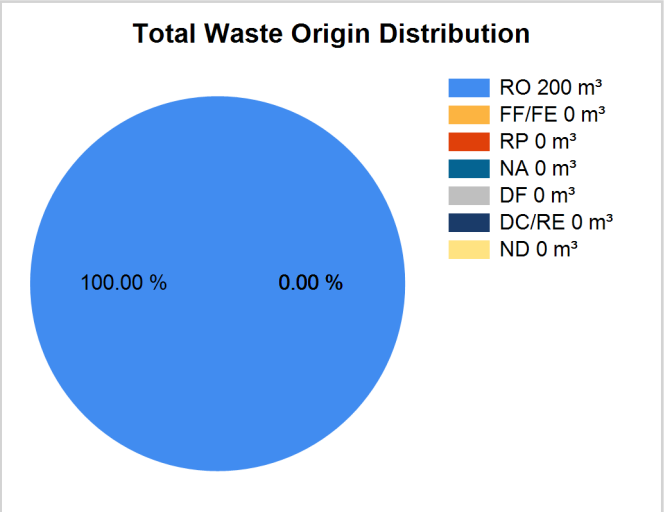
Full Name: OKG Nuclear Power Plant

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-SL**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Disposal	Y	N	7500.000	7500.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Waste Class: **LILW-LL**

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-LL	Storage	Y	N	913.000	913.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Processing - Treatment method(s)

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

Comment **# 7606: dewatering**

Dewatering was not available as a treatment method in the NEWMDB's list of methods and, therefore, it is not indicated in the list of treatment methods selected for Barseback. Dewatering is a process/treatment method in which spent ion exchange resin is collected in a container
(waste packaging) and the free water which comes with the resin is pumped away. The result is something which looks like clay. This package is the waste package ready for disposal.

Site (Data) : OKG

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

Processing - Conditioning method(s)

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

Site (Structure) : Ringhals

Country: SWEDEN Reporting Year: 2008

Full Name: Ringhals Nuclear Power Plant

Location: On the west coast south of Gotheborg

Description:

Official Website:

License Holder(s): Ringhals AB

Waste management facilities that are located at this site:

Facility:	**Cement**
Description:	Conditioning of resins with cement

Processing part of facility **Cement**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1974

Site (Structure) : Ringhals

Country: SWEDEN Reporting Year: 2008

Facility:	**Compaction**
Description:	Compaction of scrap and trash containing small activity quantities

Processing part of facility **Compaction**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1982

Site (Structure) : Ringhals

Country: SWEDEN Reporting Year: 2008

Facility:	**Ringhals**
Description:	Landfill for LILW with very low activity content. Activity content, total 100 GBq. Specific activity max 300 Bq/g and surface dose rate max 0.5 mSv/h

Disposal part of facility **Ringhals**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	3500	Capacity planned (m3):	10000

Depth (m):	0	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
operation	1993	2040	False

Site (Structure) : Ringhals

Country: SWEDEN Reporting Year: 2008

Facility:	**Solid**
Description:	Scrap and trash backfilled with cement

Processing part of facility **Solid**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1977

Site (Data) : Ringhals

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

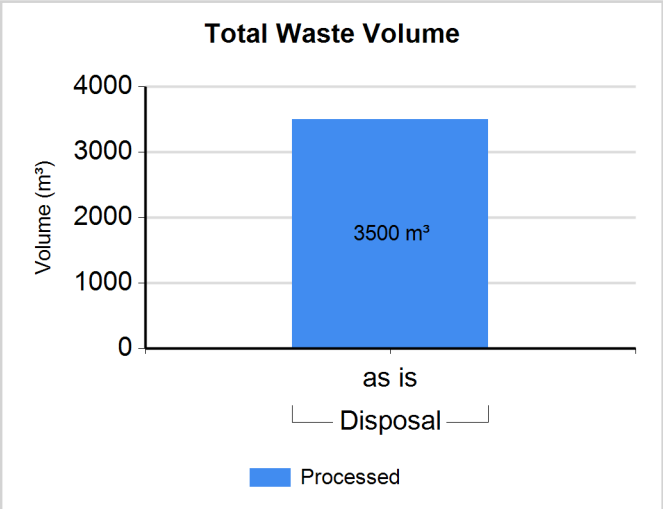
Site Name: **Ringhals**

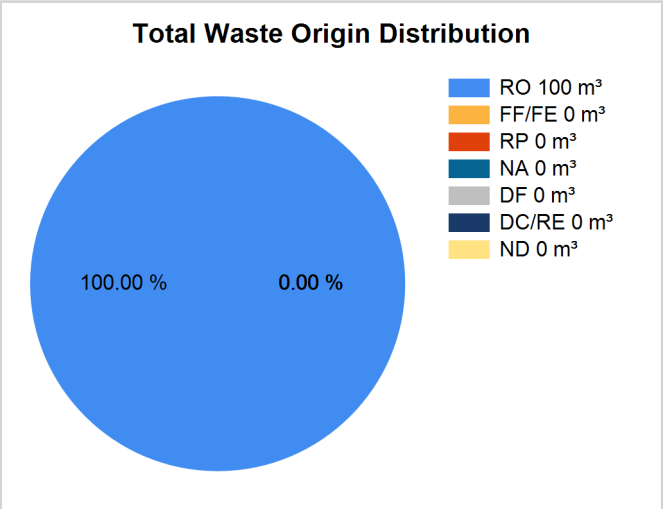
Full Name: Ringhals Nuclear Power Plant

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-SL**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Disposal	Y	N	3500.000	3500.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Site (Structure) : SFL 3-5

Country: SWEDEN Reporting Year: 2008

Full Name: Repository for LILW-LL

Location: Co-located to the Forsmark NPP 180 km north of Stockholm

Description:

Official Website:

License Holder(s):

Waste management facilities that are located at this site:

Facility:	**SFL 3-5**
Description:	Repository for LILW-LL

Disposal part of facility **SFL 3-5**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	rock cavern (under sea, land access)		
Facility is modular?	No		
Capacity existing (m3):	0	Capacity planned (m3):	20000

Depth (m):	200-300	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
operation	2045	2060	False

Site (Structure) : SFR 1

Country: SWEDEN Reporting Year: 2008

Full Name: Repository for Radioactive Operational Waste

Location: Co-located to the Forsmark NPP 180 km north of Stockholm

Description:

Official Website:

License Holder(s): Swedish Nuclear Fuel and Waste Management Co (SKB)

Waste management facilities that are located at this site:

Site (Structure) : SFR 1

Country: SWEDEN Reporting Year: 2008

Facility:	**SFR 1**
Description:	Repository for disposal of operational LILW in underground cavities excavated in crystalline rock

Disposal part of facility **SFR 1**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	rock cavern (under sea, land access)		
Facility is modular?	No		
Capacity existing (m3):	63000	Capacity planned (m3):	63000

Depth (m):	>50	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1974	1976	False
site selection	1980	1981	False
design	1982	1983	False
construction	1983	1987	False
commissioning	1987	1988	False
operation	1988	2030	False
closure	2030		False

Site (Data) : SFR 1

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

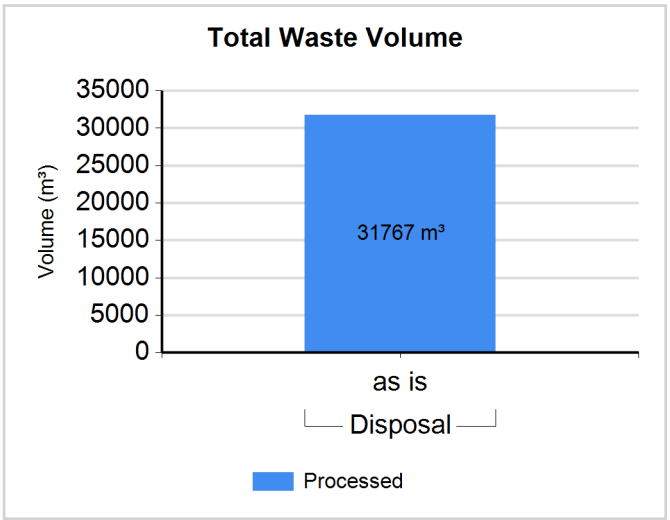
Site Name: **SFR 1**

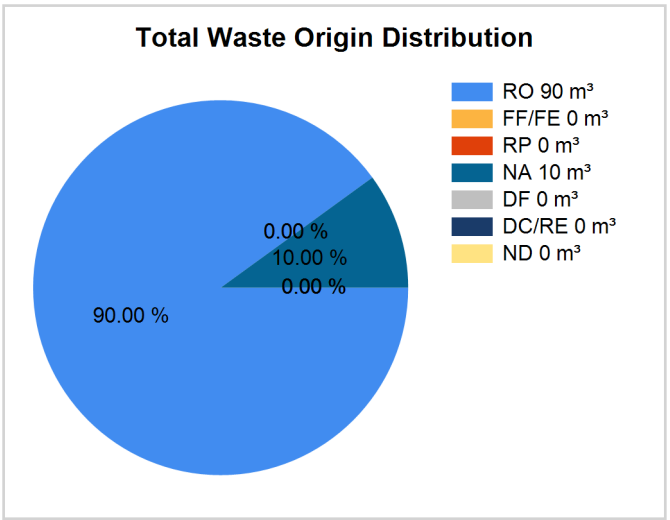
Full Name: Repository for Radioactive Operational Waste

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-SL**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Disposal	Y	N	31767.000	31767.000	90.00	0.00	0.00	10.00	0.00	0.00	0.00

Site (Structure) : SFR 3

Country: SWEDEN Reporting Year: 2008

Full Name: Repository for decommissioning waste

Location: Site not selected but planned as co-located to the Forsmark NPP 180 km north of Stockholm

Description:

Official Website:

License Holder(s):

Waste management facilities that are located at this site:

Facility:	**SFR 3**
Description:	Repository for disposal of LILW from decommissioning

Disposal part of facility **SFR 3**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	rock cavern (under sea, land access)		
Facility is modular?	No		
Capacity existing (m3):	0	Capacity planned (m3):	150000

Depth (m):	50	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1982		False
operation	2020	2040	False

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Full Name: Studsvik Research Center

Location: Outside Nyköping 100 km south of Stockholm

Location: Outside Nyköping 100 km south of Stockholm

Description:

Official Website:

License Holder(s): Studsvik AB / AB SVAFO

Studsvik AB / AB SVAFO

Waste management facilities that are located at this site:

Facility:	**Cement**
Description:	Cement solidification of wet waste, ion exchange resins, concentrats etc.

Processing part of facility **Cement**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Conditioning
Year opened:	1999

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Compaction**
Description:	Compaction of low active waste in containers

Processing part of facility **Compaction**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1970

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Hot cell**
Description:	Shielded treatment and conditioning of solid LILW. Cement as backfill in waste container.

Processing part of facility **Hot cell**

The following shows processing status for waste classes and SRS.

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

Type:	Conditioning
Year opened:	0

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Incin**
Description:	Inciniration of low active trash

Processing part of facility **Incin**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1976

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Melting**
Description:	Melting of low active scrap

Processing part of facility **Melting**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
LILW-SL	No	No
LILW-LL	No	No
HLW	No	No

Type:	Treatment
Year opened:	1987

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Studsvik**
Description:	Rock cavern for storage of LILW

Storage part of facility **Studsvik**

The following shows storage status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Capacity:	

Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
AM	cave	1985	No	No	No	No

Site (Structure) : Studsvik

Country: SWEDEN Reporting Year: 2008

Facility:	**Studsvik**
Description:	Landfill for LILW with very low activity content. Activity content, total 100 GBq. Specific activity max 300 Bq/g and surface dose rate max 0.5 mSv/h

Disposal part of facility **Studsvik**

The following shows disposal status for waste classes and SRS.

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

List SRS?	No
List UMMT?	No

Type:	trench(es)		
Facility is modular?	Yes		
Capacity existing (m3):	900	Capacity planned (m3):	1200

Depth (m):	0	Host medium:	crystalline rock (granite)

Phase Name	Start Year	End Year	Estimate
operation	1987	2040	False

Site (Data) : Studsvik

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

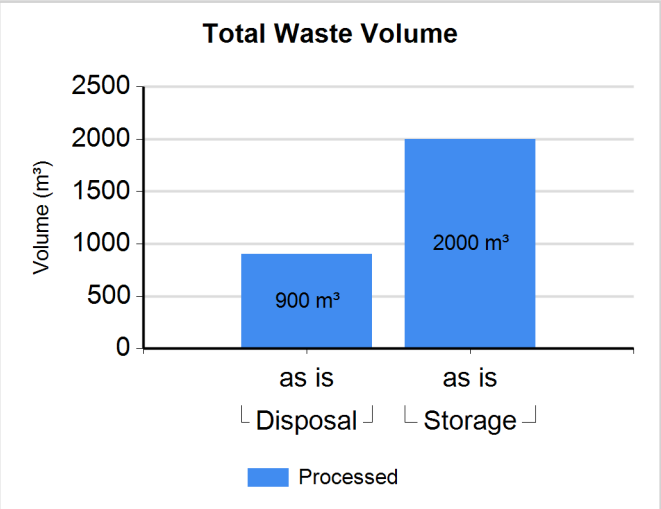
Site Name: **Studsvik**

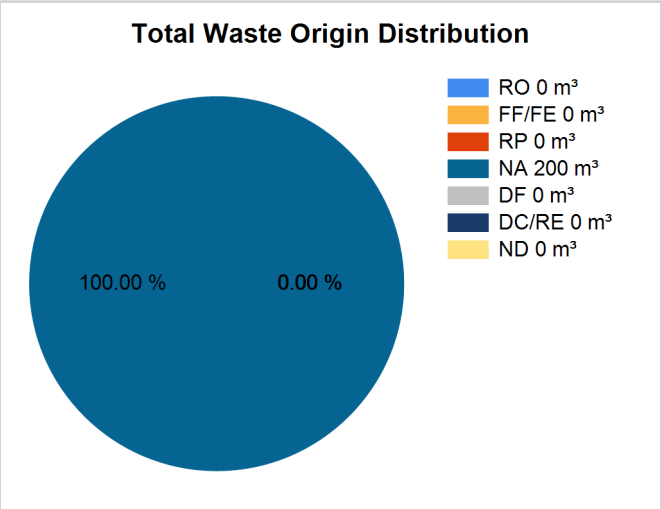
Full Name: Studsvik Research Center

Inventory Reporting Date: December 2008 Waste Matrix Used: IAEA Def.

Waste Inventory

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





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

Waste Class: **LILW-SL**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Disposal	Y	N	900.000	900.000	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Waste Class: **LILW-LL**

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-LL	Storage	Y	N	2000.000	2000.000	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Processing - Treatment method(s)

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

Site (Data) : Studsvik

Stock of waste as at December 2008

Country: SWEDEN Reporting Year: 2008

Processing - Conditioning method(s)

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

Regulators

Country: SWEDEN Reporting Year: 2008

Name:	**SSM**
Full Name:	Swedish Radiation Safety Authority
Divison:	
City or Town:	Stockholm
Main Website:	

Regulations / Laws

Country: SWEDEN Reporting Year: 2008

Name:	**Nuc Act**	
Title or Name:	The Nuclear Activities Act	
Reference Number:	1984:3	
Date Promulgated or Proclaimed:	1/1/1984	Law

Name:	**NucActOrd**	
Title or Name:	Nuclear Activities Ordinance	
Reference Number:	1984:14	
Date Promulgated or Proclaimed:	1/1/1984	Law

Name:	**Safety Reg**	
Title or Name:	Regulations Concerning Safety in Certain Nuclear Facilities	
Reference Number:	SKI FS 2004:1	
Date Promulgated or Proclaimed:	1/1/2005	Regulation

Name:	**Dose Reg**	
Title or Name:	Regulations Concerning the Final Management of Spent Nuclear Fuel and Nuclear Waste	
Reference Number:	SSI FS 1998:1	
Date Promulgated or Proclaimed:	1/1/1998	Regulation

Name:	**Archive**	
Title or Name:	Regulations Concerning Archives at Nuclear Installations	
Reference Number:	SSI FS 1997:1	
Date Promulgated or Proclaimed:	1/1/1997	Regulation

Name:	**Financing**	
Title or Name:	Act on the Financing of Future Expenses for Spent Nuclear Fuel, etc.	
Reference Number:	1992:1537	
Date Promulgated or Proclaimed:	1/1/1992	Law

Regulations / Laws

Country: SWEDEN Reporting Year: 2008

Name:	**FinanceOrd**	
Title or Name:	Ordinance on the Financing of Future Expenses for Spent Nuclear Fuel etc.	
Reference Number:	1981:671	
Date Promulgated or Proclaimed:	1/1/1981	Law

Milestones

Country: SWEDEN Reporting Year: 2008

Start Year or Reference Year:	1988	End Year:	2060
Description of Milestone:			
The final repository for short-lived radioactive waste from operation and maintenance of NPPs in operation. From approximately the year 2020 extended to acommodate decommissioning waste from NPPs			

Policies

Country: SWEDEN Reporting Year: 2008

National Systems

	Policy	(Yes;Partially;No)
Q14	Has your Country implemented a national policy for radioactive waste management?	Yes

	Strategies	(Yes;Partially;No)
Q15	Has your country developed strategies to implement a national policy?	Yes

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

	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	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

Policies

Country: SWEDEN Reporting Year: 2008

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

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

Policies

Country: SWEDEN Reporting Year: 2008

Disposal Facilities

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

	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: SWEDEN Reporting Year: 2008

Processing/Storage

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

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

	Foreign	(Yes;No)
Q121	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
Q122	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
Q123	Currently, are any of your country's wastes (processed or unprocessed, including the products of reprocessing) or spent fuel being stored in another country?	Yes
Q124	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	Yes
Q125	Currently, are there any wastes (processed or unprocessed, including the products of reprocessing) or spent fuel from another country being stored in your country?	Yes
Q126	Will some or all of the the product(s) of processing/reprocessing be returned to the country of origin?	Yes
Q127	Does the inventory you reported to the NEWMDB for your country include radioactive wastes that originated in another country or that were generated as a result of processing/reprocessing radioactive waste/spent fuel that orginated in another country?	No

Policies

Country: SWEDEN Reporting Year: 2008

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?	Yes

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

Agreements		(Yes;No)
Q93	Government to Government agreements	No
Q94	Government - Supplier agreements	No
Q95	Supplier-User agreements	No
Q97	Do any agreements include suppliers that are outside of your Country?	No

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?	Yes
Q102	Has your Country implemented dedicated disposal facilities for spent SRS?	No
Q103	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

Radioactive Waste		(Yes;No)
Q104	Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)?	Yes

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

Policies

Country: SWEDEN Reporting Year: 2008

Liquid HLW

Storage		(Yes;No)
Q106	Does your Country have high-level liquid wastes in storage?	No

UMMT

Responsibility		(Yes;No)
Q110	Does your Country have any Uranium Mine and Mill Tailings sites that do not have a designated authority to manage them?	No

Decommissioning

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

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

Timeframe		(Yes - All;Yes - Some;No)
Q112	Does your Country require a time frame for the decommissioning of nuclear fuel cycle facilities once these facilities cease operation?	No
Q113	Does your Country require a time frame for the decommissioning of non-nuclear fuel cycle facilities once these facilities cease operation?	No

Future Outlook

Country: SWEDEN Reporting Year: 2008

Data not available.

Future Outlook

Country: SWEDEN Reporting Year: 2008

Data not available.

Future Outlook

Country: SWEDEN Reporting Year: 2008

Data not available.

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