



**Country Waste Profile Report for  
NETHERLANDS  
Reporting Year: 2009**

*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: NETHERLANDS

Reporting Year: 2009

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: **National**

Yes

Description: LILW, is called in Dutch the category of 'laag- en middel radioactief afval'. For the Dutch situation no distinction is made between short lived and long lived. The reason for this is that shallow land burial is not applicable for the Netherlands and therefore all categories of waste will be disposed of in a deep geologic repository after a period of long term storage. The long term storage will take place for a period of at least 100 years.

Waste Class Name	Distribution %			
	VLLW	LLW	ILW	HLW
LILW	0.0	90.0	10.0	0.0
LILW, NORM	0.0	100.0	0.0	0.0
LILW, depU	0.0	0.0	100.0	0.0
HLW, non heat producing	0.0	0.0	100.0	0.0
HLW, heat producing	0.0	0.0	0.0	100.0

Comment **# 250: national waste categories**

Three groups of LILW are identified:

- LILW;
- LILW,NORM and
- LILW, depU

The first group, LILW is the 'normal' waste generated by the nuclear industry, users of radioactivity and users of radiation sources. According to the nature of the activity this waste group is further classified as follows:

- category A: all alpha bearing wastes
- category B: beta/gamma waste from nuclear power plants only
- category C: beta/gamma waste with halflife >15 years
- category D: beta/gamma waste with halflife <15 years.

All beta/gamma waste from the nuclear power plants is kept as a separate group because this is a well defined group that generally contains higher levels of strong emitting gamma nuclides. The A category is kept separate because these nuclides have long halflives and are highly radiotoxic. The separation between the C and D category is done on halflife, such as to include H-3 in the last category. Within a storage period of at least 100 years the last category will have decayed completely. SRS as a waste product is not kept separate. SRS is treated in the same way as 'normal' LILW, sources are embedded in a concrete matrix and subsequently stored together with other LILW.

HLW, heat producing, consists of:

- the vitrified waste from reprocessing of spent fuel from the two nuclear power plants (Borssele and Dodewaard);
- the spent fuel of the two research reactors (Petten and Delft).

HLW, non-heat producing, consists mainly of the reprocessing waste other than the vitrified residues. It also includes a small amount of waste from research on reactor fuel and some decommissioning waste.

The waste class scheme for The Netherlands is not based on a law or a regulation. It is since long (1985) common practice to use this class scheme.

The percentages in the matrix are based upon a comparison of the definitions of waste classes in both The Netherlands' and the IAEA's waste classification schemes. The percentages cited are a best estimate.

## Waste Classification Schemes

Country: NETHERLANDS

Reporting Year: 2009

**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

**Comment # 12224: Definitions for Unprocessed Waste and Processed W**

The LILW is processed in such a way that a cemented waste form results. These cemented waste forms (mostly 200 and 1000 litre packages) are suitable for at least 100 year storage in above ground buildings and are expected to be suitable also for deep geologic disposal. The LILW, NORM, is stored in 20 ft containers as unprocessed product. This is a calcinated product, that can easily be stored in containers for a period of 100 years. After 100 years the radioactivity will have decayed to a level that the material can be moved out of the radioactive materials regime (Po, Bi, and Pb-210 are short-lived). The material can either be reused, possibly after some treatment, in road-filling or comparable, or the material will be removed as chemical waste according to applicable rules and regulations at that time. The LILW, depleted uranium, is stored as unprocessed U3O8, in DV70 containers. The material is stored in an unprocessed way because of the potential value of the material in the future. If, after 100 years storage, the material has to be disposed of in a deep geological repository, it has to be treated according to the requirements for disposal at that time. The HLW, heat producing, consists of vitrified reprocessing waste and spent fuel from the research reactors. The vitrified product is suitable for long-term storage as well as for deep geological disposal. The spent fuel is contained in helium-filled canisters, which are suitable for long-term storage. Repackaging or reconditioning might be needed after 100 years according to the requirements for disposal at that time. The HLW, non heat producing, consists of compacted SE hulls and ends. This product is suitable for long-term storage as well as for deep geological disposal.

## Groups Overview

Country: NETHERLANDS

Reporting Year: 2009

<b>Reporting Group:</b>	<b>COVRA</b>			
Inventory Reporting Date:	December 2009			
Waste Matrix Used:	National			
Description:	COVRA, Centrale Organisatie Voor Radioactief Afval (Central Organisation For Radioactive Waste), the radioactive waste management organisation in the Netherlands			
Site Name	Facility Name	Facilities Defined		
BNFL	spent fuel	processing		
Cogéma	spent fuel	processing		
COVRA	COVRA-AVG	processing		
	COVRA-stor		storage	

## Site (Structure) : BNFL

Country: NETHERLANDS

Reporting Year: 2009

Full Name: BNFL reprocessing facility

Location: Sellafield  
United Kingdom

Description:

Official Website:

License Holder(s): BNFL

Waste management facilities that are located at this site:

<b>Facility:</b>	<b>spent fuel</b>	
<b>Description:</b>	For a full description of the BNFL facilities go to the UK site. At BNFL the spent fuel of the Dodewaard nuclear reactor is stored, waiting to be reprocessed	
<b>Processing part of facility</b>		
The following shows processing status for waste classes and SRS.		
<b>Waste Class</b>	<b>Actual</b>	<b>Planned</b>
LILW	No	No
LILW, NORM	No	No
LILW, depU	No	No
HLW, non heat producing	No	No
HLW, heat producing	No	No
<b>Type:</b>		
<b>Year opened:</b>		

## Site (Data) : BNFL

Stock of waste as at December 2009

Country: NETHERLANDS

Reporting Year: 2009

**Site Name:** BNFL

Full Name: BNFL reprocessing facility

Inventory Reporting Date: December 2009

Waste Matrix Used: National

**No Waste Data to report.**

## Site (Structure) : Cogéma

Country: NETHERLANDS

Reporting Year: 2009

Full Name: Cogéma reprocessing facility

Location: Cap la Hague  
France

Description:

Official Website:

License Holder(s): Cogéma

Waste management facilities that are located at this site:

<b>Facility:</b>	<b>spent fuel</b>																				
<b>Description:</b>	For a full description of the Cogéma reprocessing facility go to the France site. At Cogéma the spent fuel of the Borssele nuclear power plant is stored , waiting to be reprocessed.																				
<p><b>Processing part of facility                      spent fuel</b></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>LILW, NORM</td> <td>No</td> <td>No</td> </tr> <tr> <td>LILW, depU</td> <td>No</td> <td>No</td> </tr> <tr> <td>HLW, non heat producing</td> <td>No</td> <td>No</td> </tr> <tr> <td>HLW, heat producing</td> <td>No</td> <td>No</td> </tr> </tbody> </table>				Waste Class	Actual	Planned	LILW	No	No	LILW, NORM	No	No	LILW, depU	No	No	HLW, non heat producing	No	No	HLW, heat producing	No	No
Waste Class	Actual	Planned																			
LILW	No	No																			
LILW, NORM	No	No																			
LILW, depU	No	No																			
HLW, non heat producing	No	No																			
HLW, heat producing	No	No																			
<b>Type:</b>	Treatment, Conditioning																				
<b>Year opened:</b>	0																				

**Site (Data) : Cogéma**

Stock of waste as at December 2009

Country: NETHERLANDS

Reporting Year: 2009

**Site Name:** Cogéma

Full Name: Cogéma reprocessing facility

Inventory Reporting Date: December 2009

Waste Matrix Used: National

**Processing - Treatment method(s)**

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Calcination	N	N	Same	N
Chemical Precipitation	N	N	Same	N
Compaction	N	N	Increase	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	Suspended	N
Cementation	N	N	Same	N
Encapsulation	N	N	Same	N
Grouting	N	N	Same	N
Vitrification	N	N	Same	N



## Site (Structure) : COVRA

Country: NETHERLANDS

Reporting Year: 2009

Full Name: National radioactive waste treatment and storage site of COVRA

Location: Haven- en Industriegebied Vlissingen-Oost  
(Harbour- and Industry area Vlissingen-Oost)  
Province: Zeeland  
Municipality: Borsele  
The site is located in the south-western part of the Netherlands, close to the river Westerschelde.

Description:

Official Website:

License Holder(s): COVRA N.V.  
Spanjeweg 1  
P.O.Box 202  
4380 AE Vlissingen  
The Netherlands

Waste management facilities that are located at this site:

<b>Facility:</b>	<b>COVRA-AVG</b>	
<b>Description:</b>	AVG, AfvalVerwerkingsGebouw (Waste Treatment Building) is the building at the COVRA site where low and intermediate level waste is treated and conditioned.	
<b>Processing part of facility COVRA-AVG</b>		
The following shows processing status for waste classes and SRS.		
<b>Waste Class</b>	<b>Actual</b>	<b>Planned</b>
LILW	No	No
LILW, NORM	No	No
LILW, depU	No	No
HLW, non heat producing	No	No
HLW, heat producing	No	No
<b>Type:</b>	Treatment, Conditioning	
<b>Year opened:</b>	1992	

## Site (Structure) : COVRA

Country: NETHERLANDS

Reporting Year: 2009

<b>Facility:</b>	<b>COVRA-stor</b>
<b>Description:</b>	Separate storage buildings are present at the COVRA site for LILW (LOG), HLW (HABOG), NORM (COG) and for depleted U (VOG)

**Storage part of facility****COVRA-stor**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
LILW	Yes	Yes
LILW, NORM	Yes	Yes
LILW, depU	Yes	Yes
HLW, non heat producing	Yes	Yes
HLW, heat producing	Yes	Yes

List SRS?	No
List UMMT?	No

<b>Capacity:</b>	All buildings are constructed such as to allow modular extension. At the site (25 ha) room is available for the waste expected to be generated in a period of 100 years.
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## Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
LOG	building	1991	No	No	Yes	No
COG	building	2000	No	No	Yes	No
VOG	building	2004	No	No	Yes	No
HABOG	bunker	2003	No	No	Yes	No

# Site (Data) : COVRA

Stock of waste as at December 2009

Country: NETHERLANDS

Reporting Year: 2009

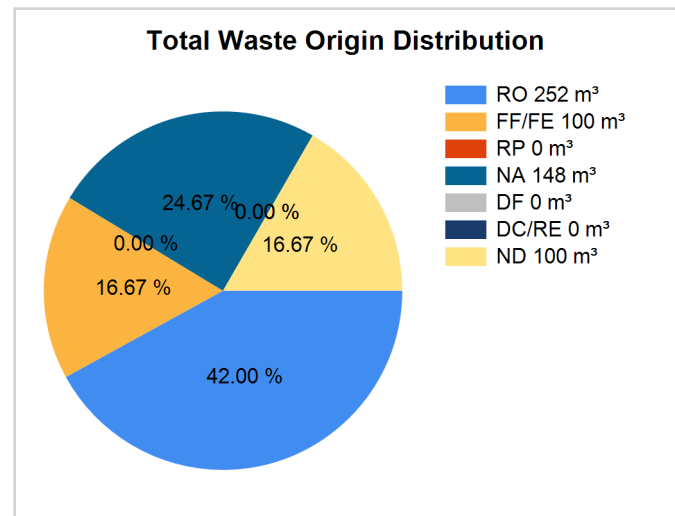
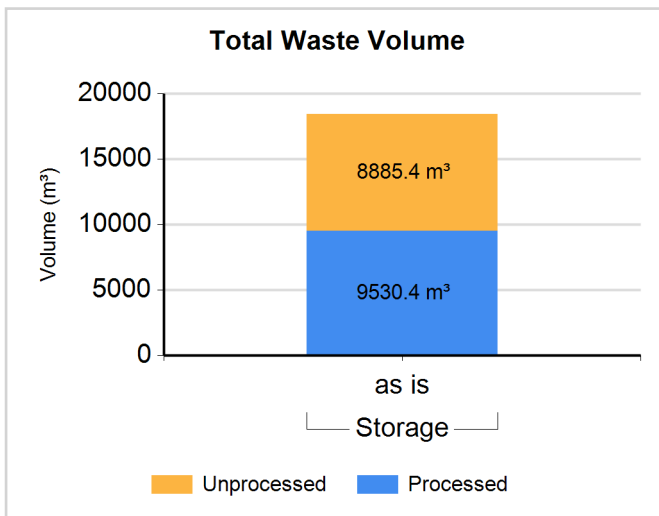
**Site Name:** COVRA

**Full Name:** National radioactive waste treatment and storage site of COVRA

**Inventory Reporting Date:** December 2009 **Waste Matrix Used:** National

## 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) : COVRA

Stock of waste as at December 2009

Country: NETHERLANDS

Reporting Year: 2009

**Waste Class: LILW**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m <sup>3</sup> )	Volume "as dispo" (m <sup>3</sup> )	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW	Storage / COVRA-stor	Y	N	9498.000	9498.000	52.00	0.00	0.00	48.00	0.00	0.00	0.00

**Waste Class: LILW, NORM**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m <sup>3</sup> )	Volume "as dispo" (m <sup>3</sup> )	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW, NORM	Storage / COVRA-stor	N	N	4400.000	4400.000	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Comment # 9595: Waste Storage facilities/Class LILW, NORM

The LILW, NORM is generated in the phosphor plant. Because of the nature of the production process it is a calcinate with Po-210, Bi-210 and Pb-210 only.

**Waste Class: LILW, depU**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m <sup>3</sup> )	Volume "as dispo" (m <sup>3</sup> )	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW, depU	Storage / COVRA-stor	N	N	4480.000	4480.000	0.00	100.00	0.00	0.00	0.00	0.00	0.00

**Waste Class: HLW, non heat producing**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m <sup>3</sup> )	Volume "as dispo" (m <sup>3</sup> )	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
HLW, non heat producing	Storage / COVRA-stor	Y	N	7.200	7.200	100.00	0.00	0.00	0.00	0.00	0.00	0.00

**Waste Class: HLW, heat producing**

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m <sup>3</sup> )	Volume "as dispo" (m <sup>3</sup> )	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
HLW, heat producing	Storage / COVRA-stor	N	N	5.400	5.400	0.00	0.00	0.00	100.00	0.00	0.00	0.00
HLW, heat producing	Storage / COVRA-stor	Y	N	25.200	25.200	100.00	0.00	0.00	0.00	0.00	0.00	0.00

Comment # 9614: Waste Storage facilities/Class HLW, heat produc

The processed waste consists of the vitrified waste product resulting from the reprocessing of fuel from n.p.p. Borssele. Apart from this waste also 4.4 m<sup>3</sup> of spent fuel from the research reactors at Petten and Delft is stored at COVRA as well as 0.6 m<sup>3</sup> of enriched uranium filters from molybdenum production. Spent fuel and filters are packaged in a canister filled with helium; they are however considered here as 'unprocessed' waste.

**Processing - Treatment method(s)**

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation	N	N	Same	N
Compaction	N	N	Same	N
Incineration	N	N	Same	N
Shredding and Compaction	N	N	Same	N
Size Reduction	N	N	Same	N
Super Compaction	N	N	Same	N
Wastewater Treatment	N	N	Same	N

## Site (Data) : COVRA

Stock of waste as at December 2009

Country: NETHERLANDS

Reporting Year: 2009

**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
Encapsulation	N	N	Same	N

Comment **# 7369: Cementation and encapsulation**

All LILW is brought into a cemented waste form for storage.

The spent fuel of the research reactors as well as the uranium filters from molybdenum production are encapsulated in a cannister filled with helium gas.

## Regulators

Country: NETHERLANDS

Reporting Year: 2009

<b>Name:</b>	<b>VROM</b>
Full Name:	Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (Ministry of Housing, Spatial Planning and Environment)
Divison:	Directie Stoffen, Veiligheid, Straling (Directorate for Chemicals, Safety, Radiation protection) VROM Inspectie (Inspectotote General) KernFysische Dienst (Department of Nuclear Safety, Swecurity and Safeguards)
City or Town:	Den Haag (The Hague)
Main Website:	

Comment **# 5218: Wastes that are regulated by the Regulator**

Matrix National - HLW, heat producing, HLW, non heat producing, LILW

<b>Name:</b>	<b>EZ</b>
Full Name:	Ministerie van Economische Zaken ( Ministry of Economic Affairs)
Divison:	Directoraat-Generaal voor Marktordening en Energie (Directorate-General for Energy)
City or Town:	Den Haag (The Hague)
Main Website:	

Comment **# 5219: Wastes that are regulated by the Regulator**

Matrix National - HLW, heat producing, HLW, non heat producing, LILW

<b>Name:</b>	<b>SZW</b>
Full Name:	Ministerie van Sociale Zaken en Werkgelegenheid (Ministry of Social Affairs and Employment)
Divison:	Directie Arbeidsveiligheid en -Gezondheid (Directorate for Safety and Safety at Work)
City or Town:	Den Haag (The Hague)
Main Website:	

## Regulations / Laws

Country: NETHERLANDS

Reporting Year: 2009

<b>Name:</b>	<b>Kew</b>	
Title or Name:	Kernenergiewet (Nuclear Energy Act)	
Reference Number:	Staatsblad 82, 1963, last revised 2006	
Date Promulgated or Proclaimed:	2/21/1963	Law

Comment **# 5220: Wastes that are regulated by the Law**  
 Matrix National - HLW, heat producing, HLW, non heat producing, LILW

<b>Name:</b>	<b>WMO-decree</b>	
Title or Name:	Beschikking inzake erkenning Centrale Organisatie voor Radioactief Afval N.V. als ophaaldienst (Decree on establishment of COVRA as recognised waste management organisation)	
Reference Number:	Staatsblad 176, 1987, last revised 2007 Stc 246	
Date Promulgated or Proclaimed:	8/31/1987	Law

Comment **# 5221: Wastes that are regulated by the Law**  
 Matrix National - HLW, heat producing, HLW, non heat producing, LILW

<b>Name:</b>	<b>Wm</b>	
Title or Name:	Environmental Protection Act (Wet milieubeheer )	
Reference Number:	Staatsblad 442, 1979, as amended 2007, Stc 414	
Date Promulgated or Proclaimed:	6/13/1979	Law

<b>Name:</b>	<b>Awb</b>	
Title or Name:	General Administrative Law Act (Algemene wet bestuursrecht)	
Reference Number:	Staatsblad 315, 1992 ,as amended 2008, Stc 561	
Date Promulgated or Proclaimed:	6/4/1992	Law

## Milestones

Country: NETHERLANDS

Reporting Year: 2009

Start Year or Reference Year:	2008	End Year:	
Description of Milestone:			
<p>At the PIME (Public Information Materials Exchange) 2008 conference in Prague, organised by the European Nuclear Society, COVRA received the PIME Award for communication in the nuclear industry. The HLW storage building of COVRA is not only a technical storage facility but also a piece of art, developed by the artist William Verstraeten. The visual appeal of the building and its nature as a talking point have lead to a great number of visitors. Because of this succes COVRA continued to use its facilities also for other needs in society such as depot storage for cultural heritage items. In the unused space of the LILW storage building museum artifacts are stored. This is a good starting point for discussions with members of the public on radioactive waste management and the time management involved.</p>			
Start Year or Reference Year:	2006	End Year:	2034
Description of Milestone:			
<p>The nuclear power plant Borssele started its operational life in 1973. Originally a lifetime of 30 year was foreseen. After technical improvements and evaluation it has been decided to extend the lifetime to 60 years. In 2006 an agreement was signed with the government that approves operation of the npp till 2033. Included in this agreement is the decision for direct dismantling at the end of the operational life.</p>			
Start Year or Reference Year:	2003	End Year:	2130
Description of Milestone:			
<p>Between 2003 and 2015 the HABOG building will receive HLW, this is the active phase of the facility. Between 2015 and 2130 HABOG will be in a passive storage phase. From 2130 all LILW, HLW and SF will be placed in a disposal facility, where the waste will be retrievable untill the decision is taken for permanent closure.</p>			
Start Year or Reference Year:	2002	End Year:	
Description of Milestone:			
<p>In April 2002 all shares within COVRA were transferred from the largest waste producers to the State. All shares were transferred to the State because:</p> <ul style="list-style-type: none"> <li>- the n.p.p. Dodewaard stopped the production of electricity in 1997;</li> <li>- the Energy Research Foundation (ECN) placed its nuclear activities in a special business unit (NRG) together with the nuclear activities of KEMA and therefore ECN was no longer interested to hold shares in COVRA;</li> <li>- liberalisation of the electricity market and therefore the n.p.p. Borsele focussed on core-business activities;</li> <li>- no important nuclear activities are expected in the foreseeable future.</li> </ul> <p>As only shareholder acts the Ministry of Finance. This Ministry keeps close contacts with the Ministry of Environment, which is responsible for the general policy of the Netherlands with respect to radioactive waste.</p>			
Start Year or Reference Year:	1994	End Year:	2003
Description of Milestone:			
<p>In 1994 the preparations were started to obtain a license for the storage building for HLW and SF (HABOG building). After a long legal process, the granted license could be used in 1999. Construction of HABOG started in 1999 and was finished in 2003. In September 2003 the facility was officially inaugurated by HM the Queen Beatrix. The first HLW was stored in the building in November of that year.</p>			



## Milestones

Country: NETHERLANDS

Reporting Year: 2009

Start Year or Reference Year:	1984	End Year:	1992
Description of Milestone:			
<p>Between 1984 and 1987 a site selection procedure was followed to find a site where treatment and long term storage of all the nations radioactive waste could be established. In 1987 COVRA applied for a license (Nuclear Energy Act) for the present site at the Harbour and Industrial Area Vlissingen-Oost. The license was granted in 1989. Construction of waste treatment and storage facilities for LILW took place between 1989 and 1992. All LILW temporarily stored at the Petten site was transferred to the new site between 1992 and 1994.</p>			
Start Year or Reference Year:	1982	End Year:	1992
Description of Milestone:			
<p>Seadumping was abandoned.  COVRA was established as national waste management organisation. COVRA started as private company with limited liability (Naamloze Vennootschap or N.V. in Dutch). Shareholders:</p> <ul style="list-style-type: none"> <li>- 30% n.p.p. Borssele (EPZ)</li> <li>- 30% n.p.p. Dodewaard (GKN)</li> <li>- 30% Energy Research Foundation (ECN)</li> <li>- 10% the State of the Netherlands.</li> </ul> <p>The structure changed in 2002 (see milestone 2002)  As an interim solution all LILW was conditioned and stored at the site of the Energy Research Foundation at Petten (Noord-Holland). This ended in 1992, because a new site was opened at the Harbour and Industrial Area Vlissingen-Oost.</p>			
Start Year or Reference Year:	1950	End Year:	1982
Description of Milestone:			
Seadumping was used as disposal for LILW.			

## Policies

Country: NETHERLANDS

Reporting Year: 2009

## National Systems

Policy	(Yes;Partially;No)
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Q14	Has your Country implemented a national policy for radioactive waste management?	Yes
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Comment **# 7380: National waste management policy**

Since 1984 the government of the Netherlands follows a straightforward policy based on the principle that hazardous materials must be 'isolated, controlled and monitored'. Main elements of this policy are:

- all kinds and categories of radioactive waste will be stored for at least 100 years above ground in engineered structures which allow retrieval at all times;
- long-term storage, together with a central treatment facility is seen as a normal industrial activity and will be located on one single site;
- research will be performed on final disposal possibilities within the Netherlands or within an international framework;
- COVRA will take care of all the wastes produced.

Direct disposal is not yet feasible in the Netherlands. A disposal site for this type of waste is not available, the public acceptability for deep geologic disposal is low and the small volumes of waste do not yet require an immediate final solution. Also the financial burden of a direct disposal facility is prohibitive for the small quantities concerned. The money can however be generated when a capital growth fund is allowed to grow over a substantial time period.

Long-term storage also allows for the application of future international or regional disposal solutions or even complete new techniques to remove the hazardous constituents.

The choice to store for a long time was well considered and was not taken as a 'wait and see' option. This is clearly demonstrated by the fact that integral parts of the policy are:

- the creation of a capital growth fund;
- a clear choice to transfer the ownership of the waste fully to COVRA.

This policy does not leave the burden of the waste generated today to future generations. Only the execution of the disposal is left as a task for the future, as will be the closing of the disposal site. This is a step-wise approach, where each step can be undone and replaced by another activity if so desired.

Strategies	(Yes;Partially;No)
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Q15	Has your country developed strategies to implement a national policy?	Yes
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Requirements	(Yes;Partially;No)
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Q17	identified the parties involved in the different steps of radioactive waste management	Yes
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Q18	specified a rational set of safety, radiological and environmental protection objectives	Yes
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Q19	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
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Q20	implemented controls over radioactive waste generation	Yes
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Q21	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
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Q22	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
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Q23	implemented appropriate research and development to support the operational and regulatory needs	Yes
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Q24	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
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Q25	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes
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## Policies

Country: NETHERLANDS

Reporting Year: 2009

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

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

Clearance		(Yes;No)
Q128	Does your country have "clearly defined clearance levels based on radiological criteria, with policy statements that material below those levels can be recycled or disposed of with non-radioactive wastes"?	Yes
Q129	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
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 # 9714: Policies National Systems-Clearance

Clearance is regularly used for short lived waste in the medical and research area. Waste can be stored for two years maximum at the generator's site to allow for decay under the clearance level. Then the waste is disposed of as non-radioactive material.

Clearance and exemption levels are the same in the national legislation.

## Policies

Country: NETHERLANDS

Reporting Year: 2009

## Disposal Facilities

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

Operation		(Yes - All;Yes - Some;No)
Q60	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

## Comment # 351: Acceptance criteria for disposal

There is no operating disposal facility, however waste has to be conditioned according to approved schemes and then it will be suitable for final disposal (reference disposal facility is a deep disposal facility in salt). For LILW and for HLW conditioning schemes are present, not yet for SF.

Post-Closure		(Yes;No)
Q61	Does your Country have any written policies to address the maintenance of records that describe the design, location and inventory of waste disposal facilities?	No
Q63	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

## Policies

Country: NETHERLANDS

Reporting Year: 2009

**Processing/Storage**

<b>Policies/Procedures</b>		<b>(Yes;No)</b>
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)	Yes
<b>Implementation</b>		<b>(Yes;No)</b>
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?	Yes
<b>Foreign</b>		<b>(Yes;No)</b>
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)?	No

## Policies

Country: NETHERLANDS

Reporting Year: 2009

**Spent/Disused SRS**

<b>Registration</b>		<b>(Yes;No)</b>
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
<b>Procedures</b>		<b>(Yes;No)</b>
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
<b>Agreements</b>		<b>(Yes;No)</b>
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
<b>Release / Disposal</b>		<b>(Yes;No)</b>
Q99	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
Q100	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
Q101	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
Q102	Has your Country implemented dedicated disposal facilities for spent SRS?	No
Q103	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No
<b>Import-Export</b>		
<b>Radioactive Waste</b>		<b>(Yes;No)</b>
Q104	Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)?	Yes
<b>Spent Fuel</b>		<b>(Yes;No)</b>
Q105	Does your Country have laws or Regulations restricting either the import or export of spent fuel?	Yes

## Policies

Country: NETHERLANDS

Reporting Year: 2009

**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? Yes - All

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: NETHERLANDS

Reporting Year: 2009

**Data not available.**



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Reporting Year: 2009

**Data not available.**

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