Radioactive Waste Management Profiles

a Compilation of Data from the Net Enabled Waste Management Database (NEWMDB)

No. 8

This Profiles report is based on data collected using the NEWMDB from May to December 2006. The report was first published on line within the NEWMDB February 2007. Please refer to the Profiles bookmark; the page that is accessed via this bookmark lists revisions to individual Profiles (if there are any).




August 2007

IAEA
International Atomic Energy Agency

EDITORIAL NOTE

Staff of the IAEA prepared this report based on data submitted by IAEA Member States to the Agency's Net Enabled Waste Management Database. The accuracy and completeness of the information in this report is directly related to the quality of the information provided by authorized representatives from Member States.

Throughout the text, names of Member States are retained as they were when the text was compiled.

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RADIOACTIVE WASTE MANAGEMENT PROFILES – NUMBER 8
A COMPILATION OF DATA FROM THE NET ENABLED WASTE MANAGEMENT DATABASE
IAEA, VIENNA, 2007
IAEA/WMDB/8

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August 2007

CONTENTS

Note: Click on a row in the following list to view the identified PDF file

FOREWORD

The IAEA's Net Enabled Waste Management Database (NEWMDB) is an Internet-based [1] application to collect information about radioactive waste management activities and waste inventories in IAEA Member States. The NEWMDB's On Line Help [2] provides extensive detail about the purpose, scope and limitations, and use of the NEWMDB.

Guidance for submitting information to the NEWMDB is described in a "submission flowchart", which is available in all the IAEA's official languages (Arabic, Chinese, English, French, Spanish and Russian). The flowchart is publicly accessible via the NEWMDB's home page and can be helpful to those whose first language is not English.

Objectives

The principal objectives for the NEWMDB are to:

- support the routine reporting of status and trends in radioactive waste management based, to the greatest extent practicable, on quantitative data rather than anecdotal information,
- compile data on the world-wide inventory of radioactive waste in Agency Member States on an annual basis,
- provide a means to research and assess the development and implementation of national systems for radioactive waste management in Agency Member States, and
- provide a voluntary tool to Member States that supports the reporting requirements of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention).

There have been a total of 5 data collection cycles using the new system. The first data collection cycle using the NEWMDB was held July 6, 2001 to March 15, 2002. The second data collection cycle was held July 2002 to January 2003. Subsequent data collections have been conducted for 2003, 2004, and 2005. Thirty-five (35) IAEA Member States had their submissions published as part of the 5th data collection cycle (2005).

Process

The IAEA invites Member States to appoint a single point-of-contact, known as a Country Co-ordinator (CC), to interact with the NEWMDB Programme Officer. CCs are responsible for all information submitted to the IAEA via the NEWMDB.

CCs can designate and register other users, such as Report Co-ordinators (RCs) and Waste Experts (WEs), to assist with NEWMDB submissions. CCs, RCs and WEs are known as Authorized Users.

The NEWMDB was implemented as a series of components that requires Authorized Users to input and approve information in a step-wise process as follows (see Figure 1):

> ***Step 1***: CCs use the waste class matrix tool to identify all waste classification schemes used in their country and to compare these schemes with the IAEA's proposed common waste classification scheme. The matrix tool provides support for the Joint Convention requirement that "*For each Contracting Party the report shall also address its... ...criteria used to define and categorize radioactive waste*".

[1] http://www-newmdb.iaea.org/start.asp (NEWMDB's Home Page)
[2] http://www-newmdb.iaea.org/help.asp (NEWMDB's On Line Help - top page)

Step 1: includes the “General Information” part where CCs identify who regulates radioactive waste, the laws and regulations that are relevant to radioactive waste management, significant milestones in radioactive waste management in their countries, and radioactive waste management policies. CCs answer about 80 policy related questions. Figure 2 illustrates some policy questions.

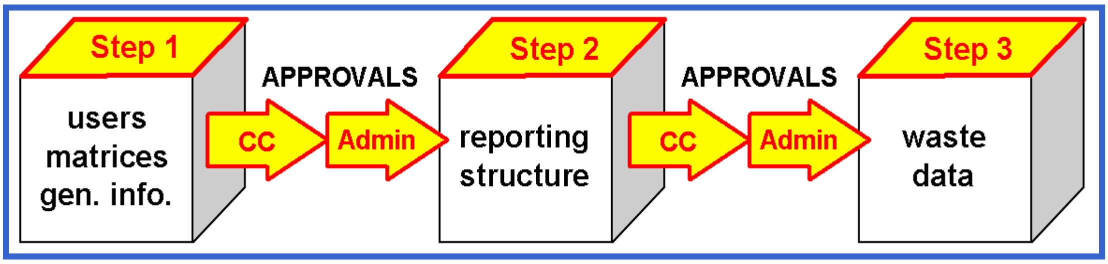
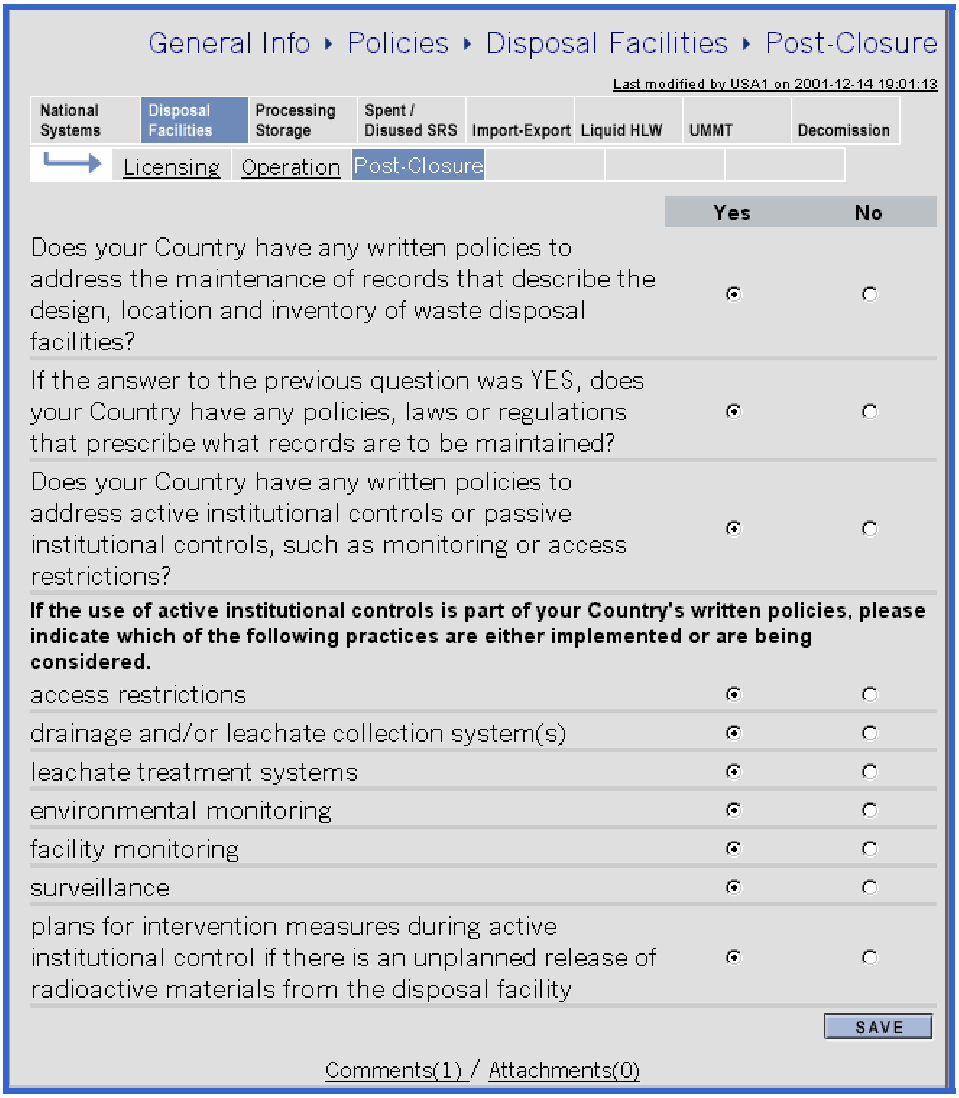


Figure 1: Steps in the NEWMDB Data Input Process



General Info ▸ Policies ▸ Disposal Facilities ▸ Post-Closure

Last modified by USA1 on 2001-12-14 19:01:13

National Systems | Disposal Facilities | Processing Storage | Spent / Disused SRS | Import-Export | Liquid HLW | UMMT | Decomission

Licensing | Operation | Post-Closure

	Yes	No
Does your Country have any written policies to address the maintenance of records that describe the design, location and inventory of waste disposal facilities?	◉	○
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?	◉	○
Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	◉	○
If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.		
access restrictions	◉	○
drainage and/or leachate collection system(s)	◉	○
leachate treatment systems	◉	○
environmental monitoring	◉	○
facility monitoring	◉	○
surveillance	◉	○
plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	◉	○

SAVE

Comments(1) / Attachments(0)

Figure 2: Example NEWMDB Policy Questions

Step 2: CCs define how the waste inventories in their respective countries will be reported to the NEWMDB in the “Framework Component”. This feature accommodates the wide range of radioactive waste management infrastructures in Member States. CCs define the number of Reporting Groups and within each Reporting Group they identify the waste management Sites and Facilities. For facilities, CCs indicate attributes such as type (i.e., processing, storage, and/or disposal), design and existing capacity, license holder, etc.

Step 3: The “Waste Data” component of the NEWMDB is used to identify waste treatment and conditioning methods for processing facilities, to specify the inventory of radioactive waste for each waste class at each waste management site, and to input lists of spent/disused SRS at waste management sites.

Data Uses

The data and other information collected by NEWMDB can and are used for a variety of purposes, including:

- the compilation of a comprehensive, international radioactive waste inventory based on a unified waste classification scheme,
  (see *Overview Reports: Consolidated Radioactive Waste Inventory*)
- reporting requirements for the Joint Convention,
  (see *Overview Reports: The Joint Convention and the NEWMDB*)

Overview Reports

Readers may notice some repetition of text in the various Overview Reports. This repetition is intentional – it allows the reports to be self-standing.

The information submitted by Member States to the NEWMDB is contained in individual “Country Waste Profiles” (CWP). See *Guide to Reading Profile Reports* for guidance on reading CWP reports.

Publication of this NEWMDB Profiles Report is made possible by the participation of Member States. The efforts of the Resident Missions to the Agency in Vienna and other governmental organizations in Member States who coordinated the submission of the data are greatly appreciated.

This report was compiled by the following Agency staff members:

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Department of Nuclear Energy	Department of Nuclear Energy
Waste Technology Section	Waste Technology Section

INTRODUCTION

The IAEA's Net Enabled Waste Management Database (NEWMDB) contains information on national radioactive waste management programmes, plans and activities, relevant laws and regulations, policies and radioactive waste inventories. The NEWMDB is an Internet based application that can be accessed via the following Internet address:

http://www-newmdb.iaea.org

Information about the development and implementation of the NEWMDB is provided in "Radioactive Waste Management Profiles – a compilation of data from the Net Enabled Waste Management Database, Number 5", which can be accessed via the following Internet address:

http://www-pub.iaea.org/MTCD/publications/PDF/rwmp-5/RWMP-V5.pdf

In support of NEWMDB, a "submission flowchart" was developed to describe how to submit information to the database. While the NEWMDB and its On-Line Help[1] are provided only in English, the submission flowchart has been translated into all the IAEA's official languages to help both Member State Country Coordinators and Public Users (see below) to better understand how the NEWMDB works (see Figure 1). All flowcharts can be accessed via the following Internet address:

http://www-newmdb.iaea.org/showhelp.asp?Topic=17-1-1

NEWMDB necessarily has separate Public and Member Areas for the database. The "Member Area" is where IAEA Member State representatives submit information to the database and is used purely for administration purposes.

After a submission is approved by a Member State representative, known as a Country Co-ordinator (CC), and by the NEWMDB Programme Officer, the information is published and can be accessed via the Public Area. Registration using an e-mail address is required to access the Public Area - see Figure 2 to learn how to register as an NEWMDB Public User. Registration is used for tracking usage statistics only.

Figure 3 illustrates how to access publicly available reports in the waste management database series.

Basic Features

Country Waste Profiles

The Country Waste Profiles reports (i.e., this document) are available on-line and in this Adobe Acrobat™ format for download. They provide a consice summary of the information entered into the NEWMDB system by each participating Member State. The information submitted by Member States to the NEWMDB is contained in individual "Country Waste Profiles" (CWP). See the "*Guide to Reading Profile Reports*" for guidance on reading CWP reports. The Guide can be accessed via the following Internet address:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

Reading Rooms

The Reading Room feature was added to the NEWMDB to serve as a "portal" to overview information about radioactive waste management in Member States. Each Member State that participates in the NEWMDB can have its own Reading Room. Additionally, the IAEA has a Reading Room. The information that is posted in a Member State's Reading Room is controlled by the CC for the Member State. This lends credibility to the information that is posted since only CCs control whether or not information is posted in Reading Rooms for public viewing. Likewise, information posted in the IAEA's Reading Room is controlled by the NEWMDB Programme Officer. The information posted in the IAEA's

[1] http://www-newmdb.iaea.org/showhelp.asp?Topic=1-1-1

Reading Room provides a portal to IAEA activities in the field of radioactive waste management. While the information posted is accessible via other IAEA resources, such as the On Line Publications Database, the IAEA's Reading Room pulls this information together to facilitate access.

Query Tools

Query tools allow Public Users to extract data from Member State submissions to the NEWMDB to better assess the information provided to the database. See Figure 4 for an example query report.

Information about the features described above can be accessed at the following Internet addresses:

http://www-newmdb.iaea.org/showhelp.asp?Topic=19-1-1
http://www-newmdb.iaea.org/showhelp.asp?Topic=21-1-1

Figure 1: Cover pages of submission flowcharts

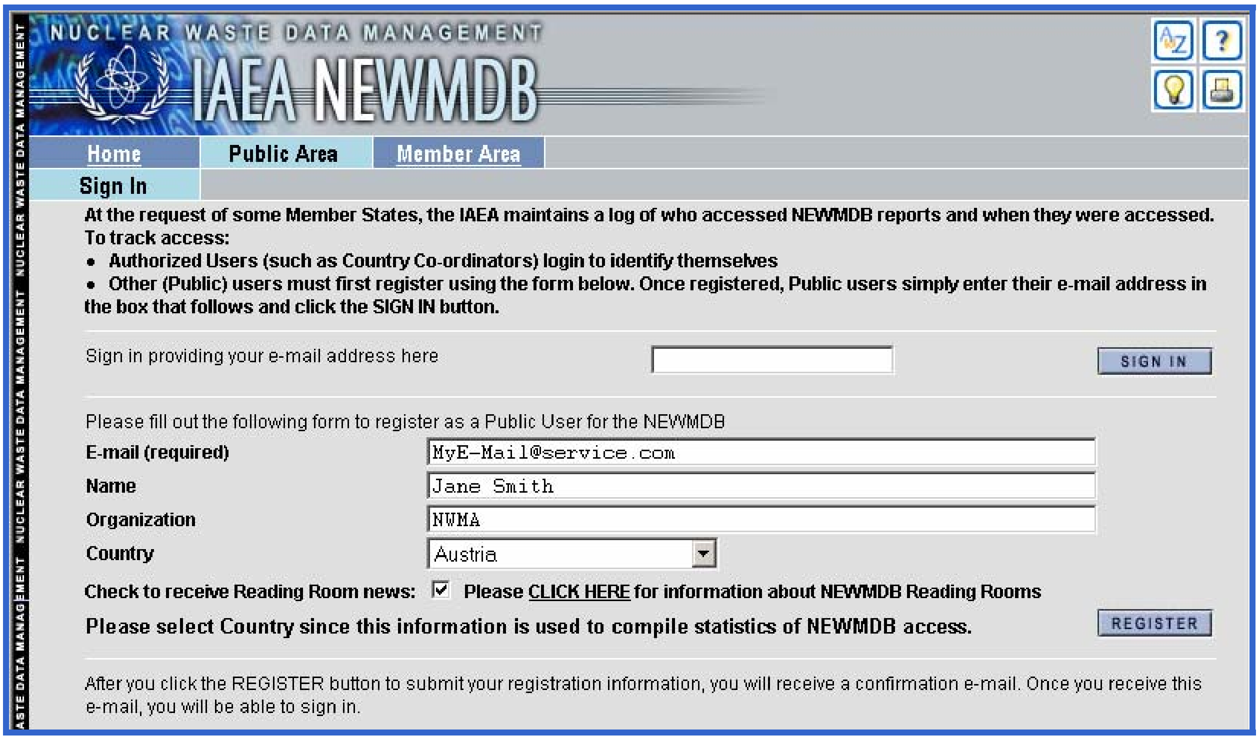


Figure 2: Public User Registration Screen

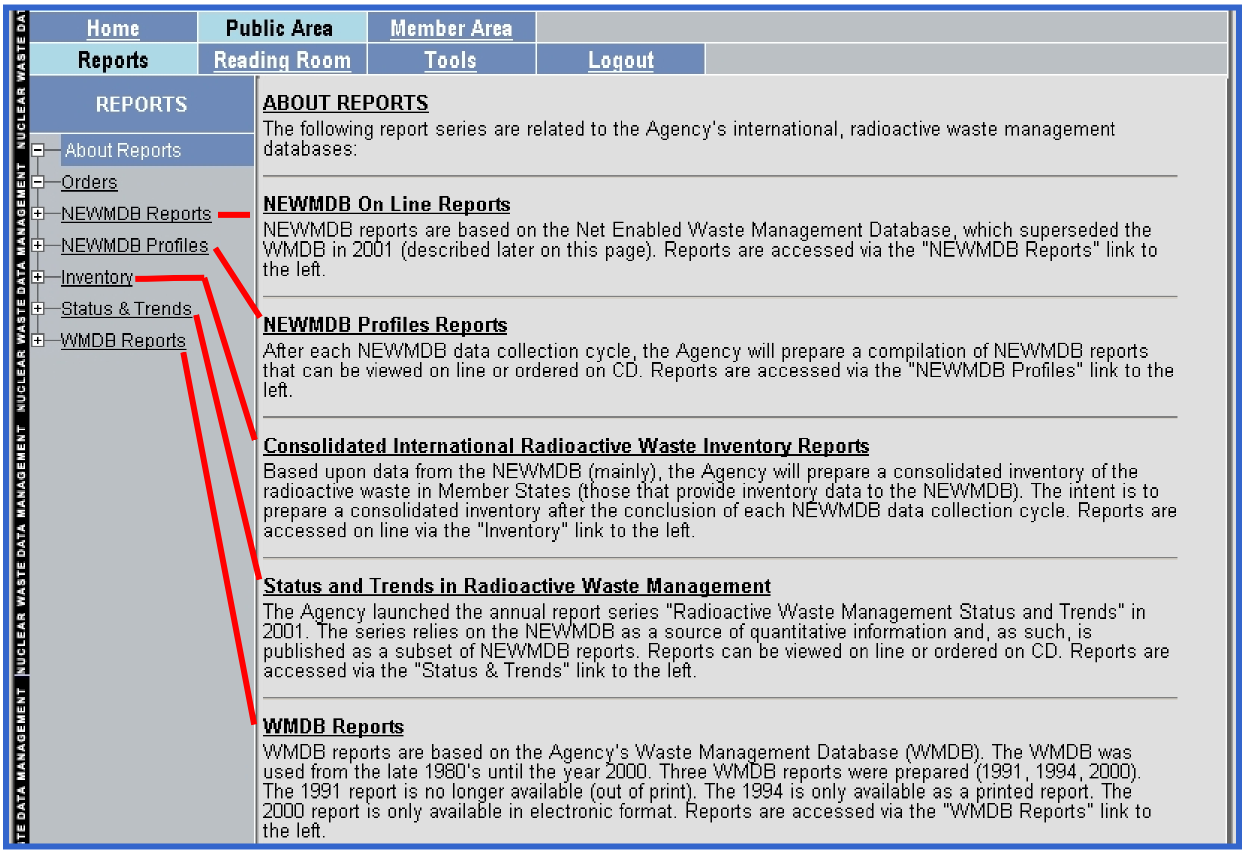


Figure 3: Access to Publicly Available Waste Management Database Series Reports

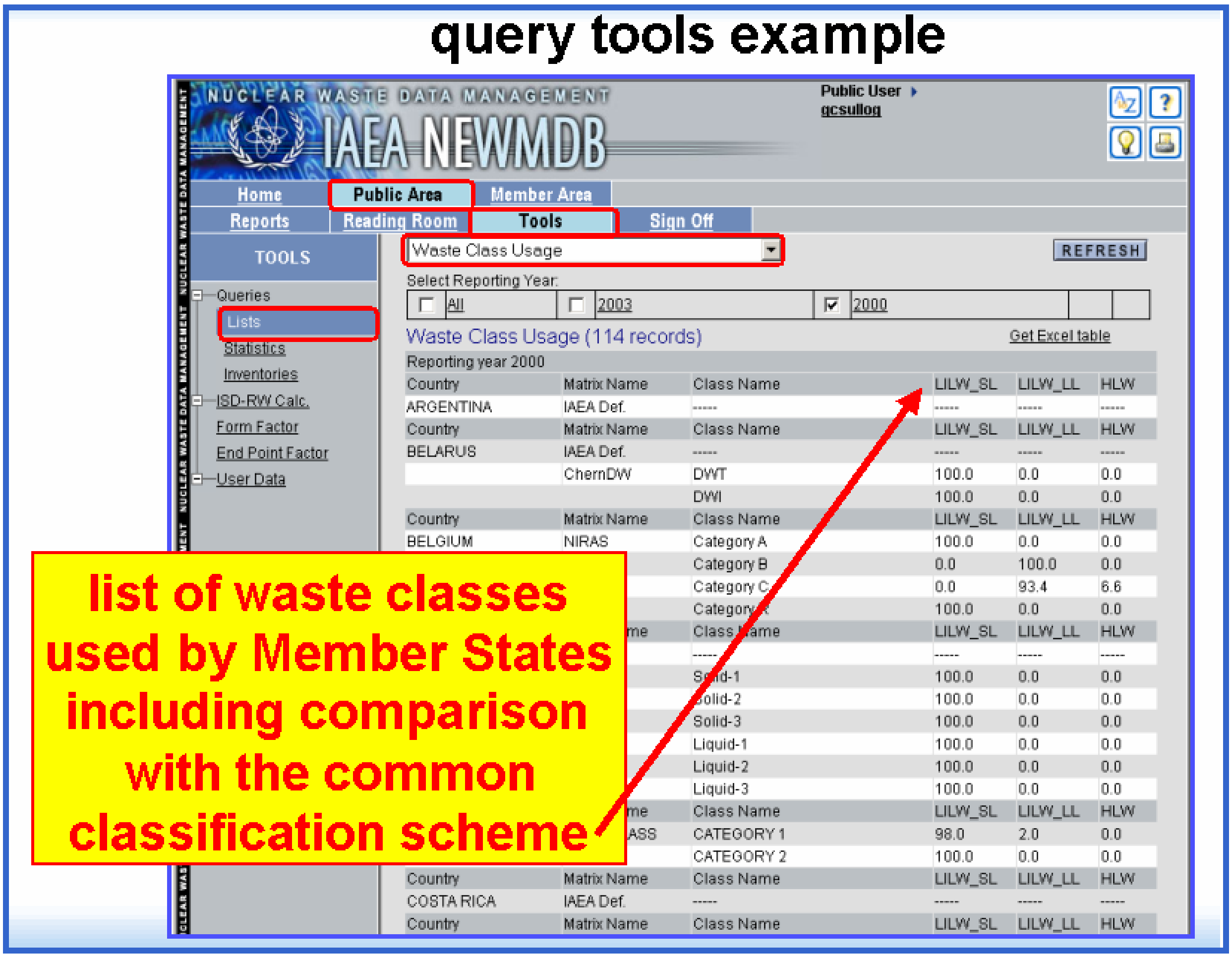


Figure 4: Query Tools Example (Radioactive Waste Classification Schemes in IAEA Member States)

Guide to Reading Member State "Country Waste Profile" Reports

(from the IAEA's Net-Enabled Waste Management Database)

for further information, please contact the Responsible Officer
via e-mail: NEWMDB@IAEA.org

This document was prepared as a sub-document for the report "Radioactive Waste Management Profiles No 8 – a compilation of data from the Net-Enabled Waste Management Database", International Atomic Energy Agency report IAEA/WMDB/8 (2007)

Guide to Reading Member State "Country Waste Profile" Reports

The Net-Enabled Waste Management Database (NEWMDB) is the International Atomic Energy Agency's main tool for collecting and disseminating information about radioactive waste management activities and waste inventories in IAEA States. This guide explains (1) how data are collected with the NEWMDB, (2) how to access publicly available reports and (3) the format of reports.

Data Collection

The NEWMDB is an on-line database [1]. Only officially recognized Member State representatives are permitted to enter and modify data in the database. The IAEA has issued Notes Verbale asking its Member States to appoint a single point-of-contact, known as a Country Co-ordinator (CC), to interact with the NEWMDB's Programme Officer. The Programme Officer establishes user accounts for CCs, who can, in turn, designate and register other users, Report Co-ordinators (RCs) and Waste Experts (WEs), to assist them with their NEWMDB submissions. Country Co-ordinators are responsible for the quality of data and completeness of information provided in NEWMDB data submissions.

The NEWMDB's On-Line Help provides extensive detail about the purpose, scope, limitations, and use of the NEWMDB [2]. Additional details of the current scope and limitations of the NEWMDB are described in Reference [3].

A data submission, full or partial, is known as a Country Waste Profile (CWP). A submission is completed when it is first "Approved by CC" and then "Approved by Admin", where "Admin" is the NEWMDB Administrator (currently, this is the NEWMDB Programme Officer).

After completing a submission to the NEWMDB, CCs indicate which report pages are to be made publicly accessible. All information either displayed or maintained as private is under the control of the CC. Once a CC has finished, the Administrator sets the submission status to Published, which allows public pages to be viewed by everyone. The report review, approval and publication process is described on the Internet at:

http://www-newmdb.iaea.org/showhelp.asp?Topic=14-1-1

Access to Publicly Available Reports

To access publicly available reports, one must register as a Public User, as illustrated in Figure 1. To display the registration screen, please access the NEWMDB's home page:

http://www-newmdb.iaea.org

At the home page, click on the Public Area tab (see Figure 1). Next, follow the instructions for registering as a Public User. After registration, you will receive an e-mail requesting that you use the link provided in the e-mail to activate your Public User account.

Activation will place a "cookie" (i.e., a small file containing registration information) on your computer. The cookie will allow you to access publicly available reports without having to sign in again. However, if you delete the cookie or if you use another computer, you will have to sign in again to access the system.

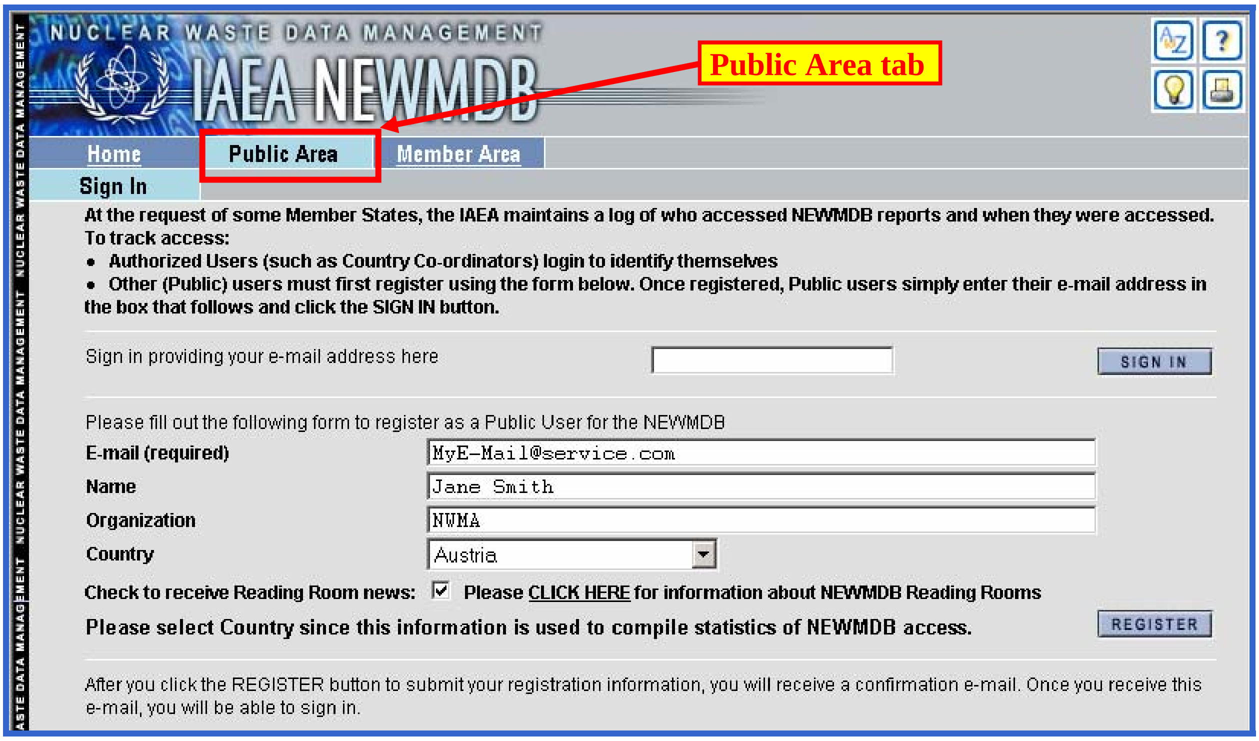


Figure 1: Public User Registration Screen

Once signed in, Public Users can access reports via the list on the left hand side of the Internet page, as shown in Figure 2. A description of the various reports is accessible via the "About Reports" link in the list. The "NEWMDB Reports" link provides access to either web-based or Adobe Acrobat PDF versions of reports.

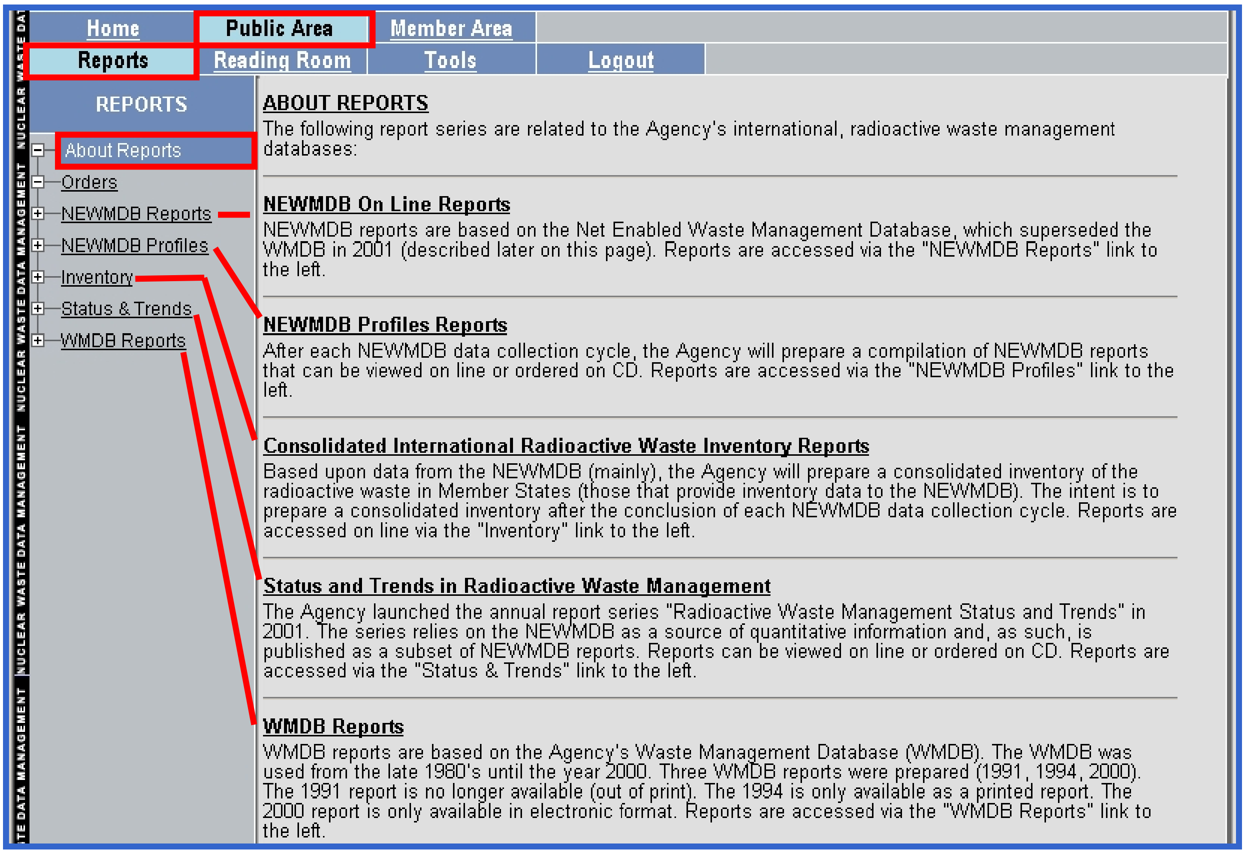


Figure 2: Access to Publicly Available Waste Management Database Series Reports
[http://www-newmdb.iaea.org/start.asp?NEWMDBSubStage=reports]

Access to on-line reports is on a country-by-country basis as well as a reporting period basis, as indicated in Figure 3. Please take note of the discussion of customization of NEWMDB submissions by Member States, which indicates that individual reports have varied structures.

On line access is useful if a Public User wants to view information about a specific country for a specific reporting period. However, if the User wants to have a complete set of NEWMDB reports for a reporting period, the preferred approach is to obtain copies of the report "*Radioactive Waste Management Profiles*", which are accessed via the "NEWMDB Profiles" link indicated in Figure 3.

The 8th "*Radioactive Waste Management Profiles*" report contains a compilation of publicly available reports that are based upon submissions to the NEWMDB during the 5th data collection cycle that was held May to December 2006. The Reporting Year was 2005 and the default Inventory Reporting Date was December 31, 2005. See Figure 4 for details about these two dates.

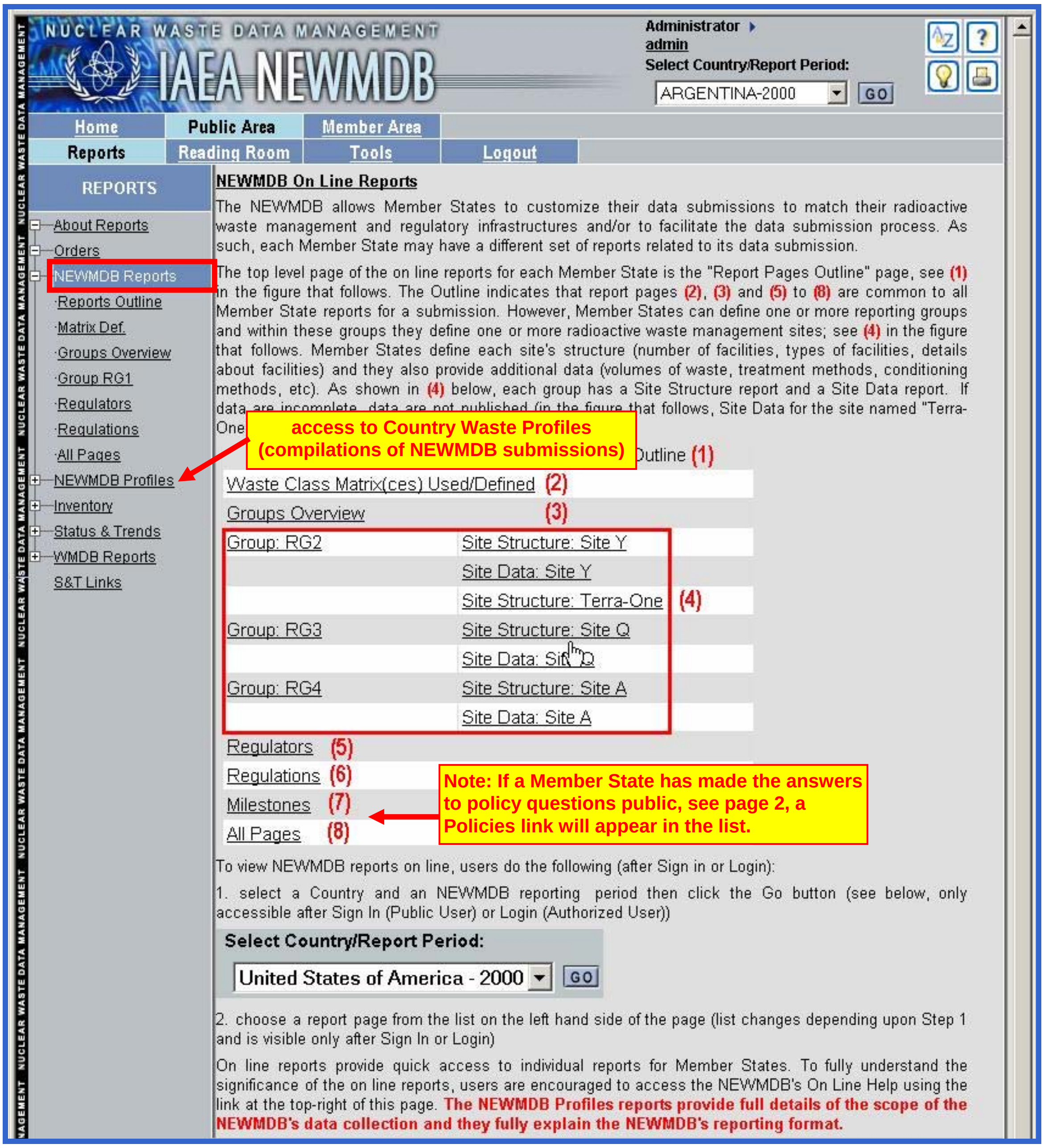


Figure 3: Access to On Line Reports

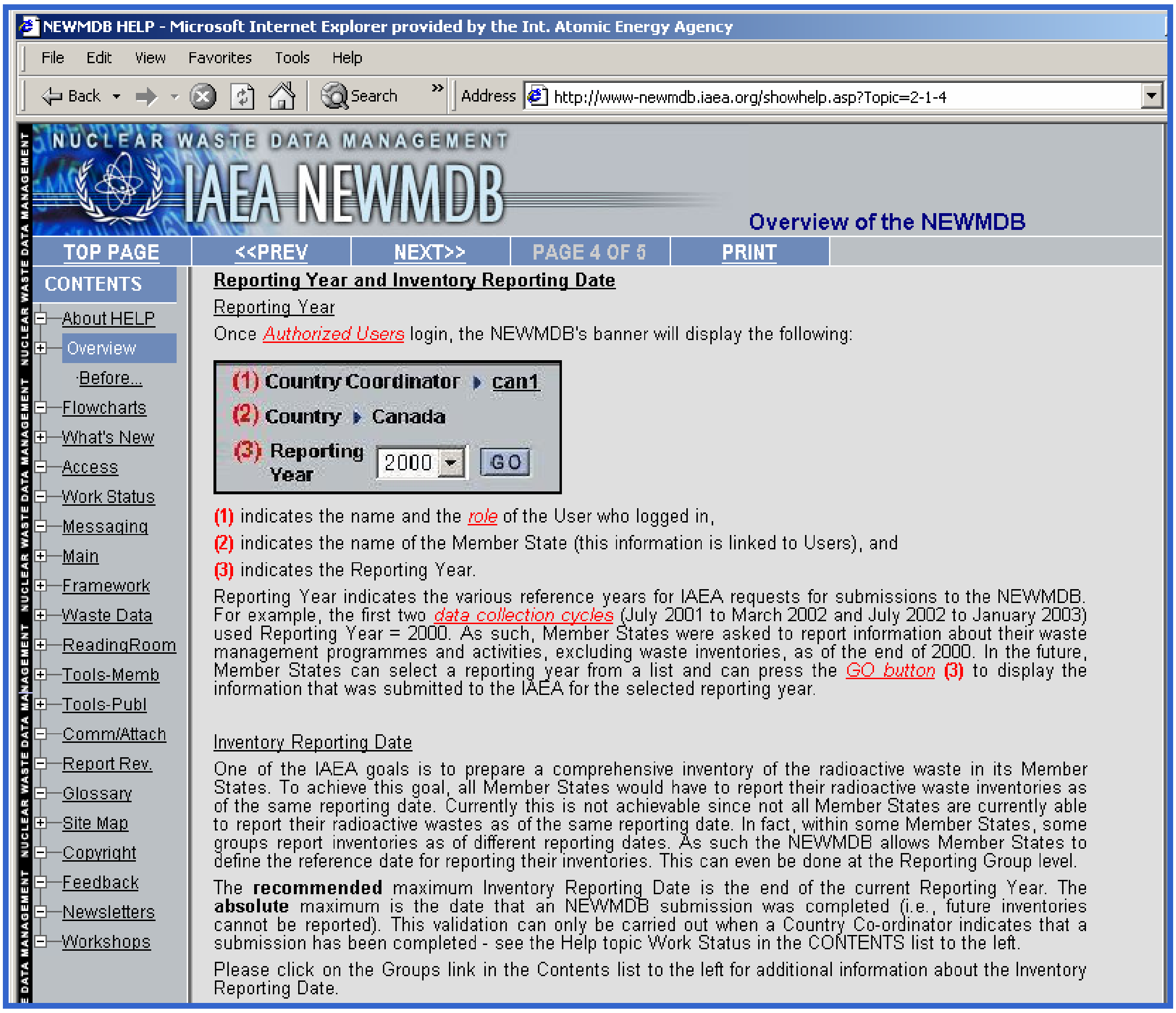


Figure 4: Reporting Year and Inventory Reporting Date

Format of Reports

The "Waste Class Matrix Used/Defined" Report

To make a submission to the NEWMDB, CCs are required to identify the waste classification schemes used in their country. Some countries use the IAEA classification scheme [4]. Many others have their own waste class definitions.

With the latter is the case, CCs must use the NEWMDB's waste class matrix tool to identify their waste classes and compare these classes to the waste classes in the IAEA proposed common classification scheme - see Figure 5. Table 1 and Figure 6 describe the publicly available report that is created based on the information entered into a waste matrix in the NEWMDB.

The matrix tool provides support for the Joint Convention [5] requirement that "*For each Contracting Party the report shall also address its criteria used to define and categorize radioactive waste*".

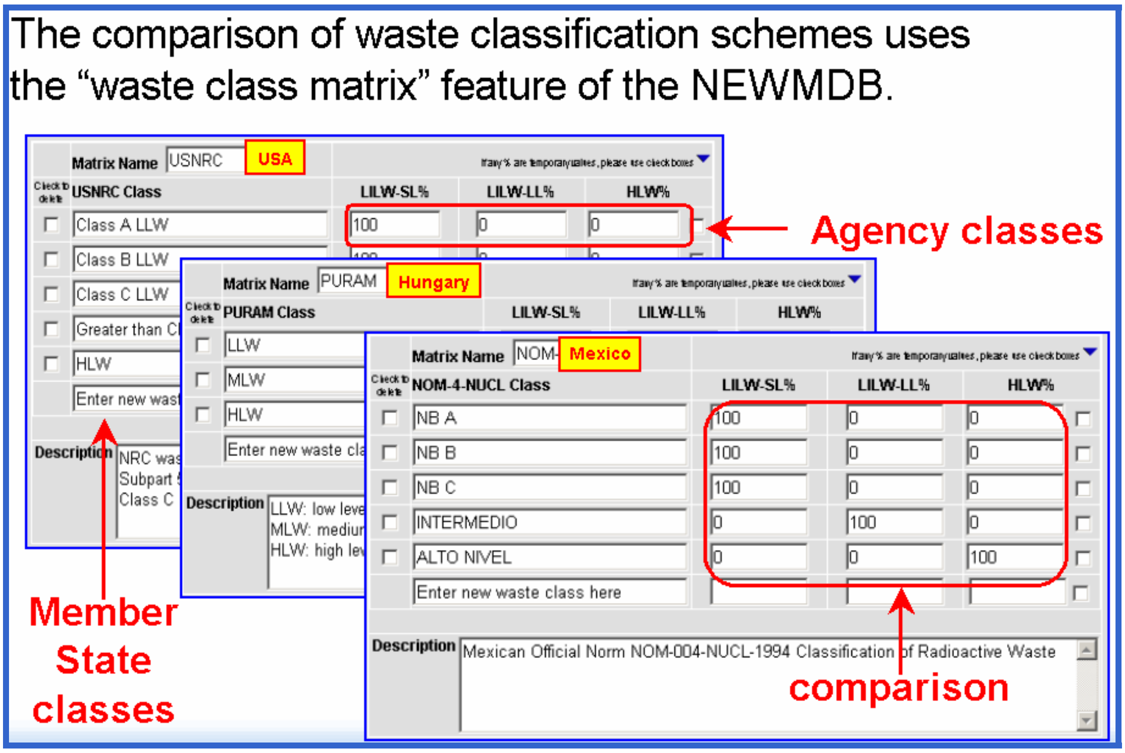


Figure 5: Overview of the Waste Class Matrix Tool in the NEWMDB

Table 1: Explanation of the Waste Class Matrix Report in Figure 7

Item in Figure 6	Description
(A)	Member States were asked to identify the waste classification schemes they use and to compare these schemes with the IAEA’s proposed waste classification scheme [4]. However, some Member States do not have formally recognized waste classification schemes. Some have schemes that cannot be readily compared with the IAEA’s scheme. For these Member States to be able to make a submission to the NEWMDB, they were given the option of indicating that they use the IAEA scheme for the purposes of reporting to the NEWMDB. A few Member States have adopted the IAEA scheme for use. Given this situation, Member States had to indicate whether or not they use the IAEA waste classification scheme. The Example indicates that the USA does not use the IAEA’s waste classification scheme.
(B) and (C)	This is an example of a Member State that defined at least one waste class matrix, since it does not use the IAEA’s common waste classification scheme. The example shows that the USA uses two waste classification schemes. One (USDOE) is used to classify wastes generated and managed by the US Department of Energy and another (USNRC) is used to classify waste generated by Nuclear Power Plants. Therefore, the CC for the USA defined two waste matrices that indicate the relationship between waste classes used in the USA (LLW, TRU, CLASS A LLW, etc.) and the IAEA’s proposed waste classes (LILW-SL, LILW-LL and HLW). The Comments and Attachments features of the NEWMDB were used by CCs to indicate whether or not the identified waste classes are required by any law/regulation and also how the relationship (%) between waste classes was determined.

International Atomic Energy Agency | NEWMDB Report

Waste Class Matrix(ces) Used/Defined

Country: United States of America | Reporting Year: 2000

Waste Class Matrix: IAEA Def. , Not Used **(A)**

Description: The Agency's standard matrix

Waste Class Matrix: USDOE **(B)**

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
HLW	0	0	100
TRU	0	100	0
LLW	99.5	0.5	0
11e2	100	0	0

Description: Reference for USDOE classes: Radioactive Waste Management Manual, DOE M 435.1, 7/9/1999

Comment #85: Waste Class Comment ← **comment**

The US DOE has a waste class called "11e2" which is essentially by-product material. Keeping with NEWMDB guidance, this year "exsitu" remediation waste, e.g., moved to a disposal cell, will be reported. UMMT disposal cells will not be reported.

Attachment #135: White paper with DOE waste classfication information and crosswalk to IAEA

File name: DOEwastematrix.wpd ← **attachment (this is a hyperlink to the attachment in the on-line report)**

File type: WordPerfect Document

Member State's Reference # 1

Waste Class Matrix: USNRC **(C)**

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Class A LLW	100	0	0
Class B LLW	100	0	0
Class C LLW	75	25	0
Greater than Class C LLW	0	100	0
HLW	0	0	100

Description: NRC waste classes defined in Title 10, Code of Federal Regulations, Part 61, Subpart 55.
Class C split based on analysis of actual data

Attachment #134: White paper on USNRC waste classification crosswalk to IAEA classes

File name: NRCwastematrix.wpd

File type: WordPerfect Document

Member State's Reference # 2

Note: Attachments may or may not be "visible for public". If the state is "visible" users can click on the hyperlink for the attachment to view it. Attachments are provided in the format that is preferred by the Member State CC that provided it.

Figure 6: Example Waste Class Matrix Report

The "Groups Overview" Report

As illustrated in Figure 4, CCs customize how information about radioactive waste management programmes and inventories will be reported to the NEWMDB. With the NEWMDB, CCs define the number of Reporting Groups and within each Reporting Group they identify the waste management sites and waste management facilities (processing, storage, disposal). For facilities, CCs indicate attributes such as type, capacity, etc.

Some Member States opted to prepare national level submissions in which information was “rolled up”. This type of submission provides less detail about individual sites and facilities. The CCs for these Member States created ***theoretical sites***, such as Site = “Historic” and Site = “Ongoing” for Canada, Site = “All Sites” for France and Site = “National” for Germany. The rolling up of information for reporting is suitable for reporting to the NEWMDB if a Member State also has a national reporting mechanism for radioactive waste management activities and inventories. In these cases, the NEWMDB submission provides a high-level overview for the Member State and national-level reports provide the fine detail.

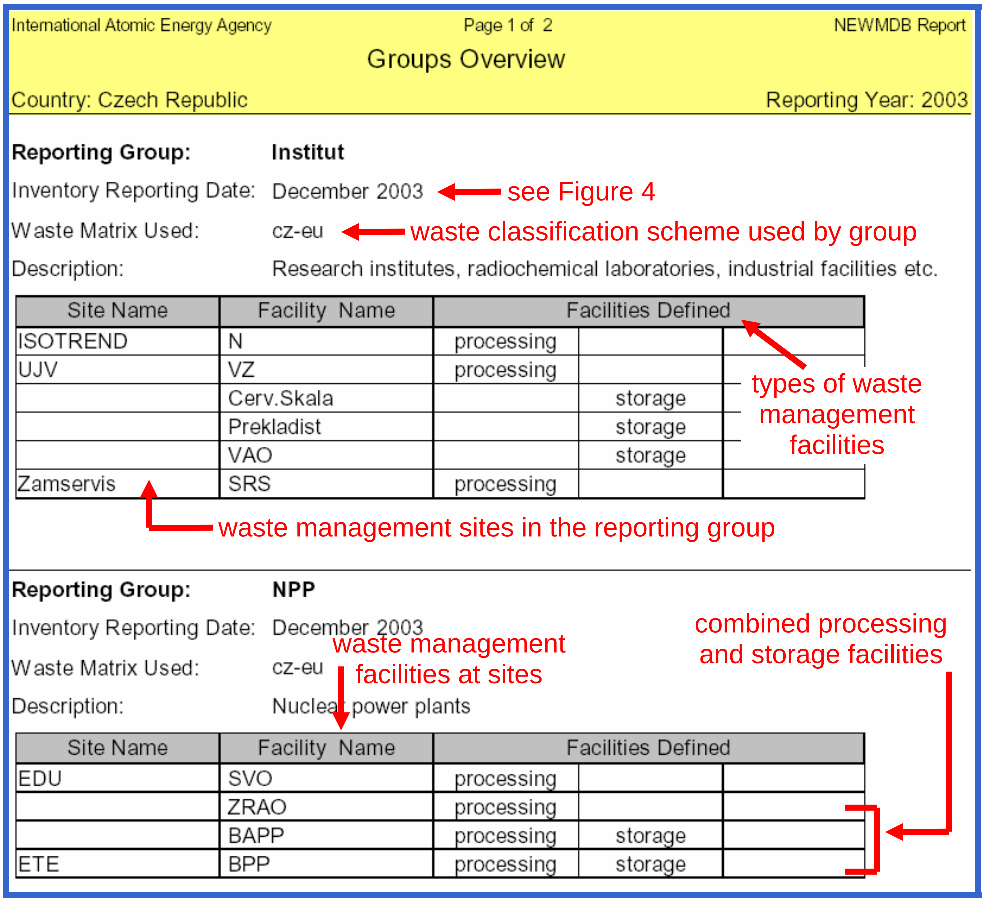
The Groups Overview report provides a brief summary of the structure of a Member State’s submission to the NEWMDB – see Figures 7 and 8 for example reports and combined facilities (i.e., multipurpose).

The “Site Structure” Report

Figures 9, 10, and 11 and Table 2 illustrate part of the Site Structure report for the LANL site in the Government reporting group in the USA submission to the NEWMDB. Full details of how CCs define waste management facilities at waste management sites are provided at the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=6-4-8

The information in Figures 9, 10, and 11 and Table 2 provides a quick guide to the Site Structure report. The “site structure” specifies the waste management facilities at a site. The information entered determines the data entry screens that are created for CCs to input additional information in the “waste data” part of their submissions (waste treatment methods, waste processing methods, waste inventories and lists of spent/disused sealed radioactive sources (SRS) – see the “Site Data” report).


International Atomic Energy Agency — Page 1 of 2 — NEWMDB Report

Groups Overview

Country: Czech Republic — Reporting Year: 2003

Reporting Group: **Institut**
Inventory Reporting Date: December 2003
Waste Matrix Used: cz-eu
Description: Research institutes, radiochemical laboratories, industrial facilities etc.

Site Name	Facility Name	Facilities Defined		
ISOTREND	N	processing		
UJV	VZ	processing		
	Cerv.Skala		storage	
	Prekladist		storage	
	VAO		storage	
Zamservis	SRS	processing		

Reporting Group: **NPP**
Inventory Reporting Date: December 2003
Waste Matrix Used: cz-eu
Description: Nuclear power plants

Site Name	Facility Name	Facilities Defined		
EDU	SVO	processing		
	ZRAO	processing		
	BAPP	processing	storage	
ETE	BPP	processing	storage	

Figure 2: Example Groups Overview Report – Czech Republic

International Atomic Energy Agency | Page 1 of 1 | NEWMDB Report

Groups Overview

Country: Canada | Reporting Year: 2003

Reporting Group: **National**

Inventory Reporting Date: December 2003

Waste Matrix Used: NRCan

Description: The national inventory of radioactive waste in Canada is reported according to "on going" and "historical" waste. For reporting to the NEWMDB (to allow traceability), two "theoretical sites" are defined: ONGOING and HISTORICAL

Site Name	Facility Name	Facilities Defined		
HISTORIC	PGWMF		storage	
	PHRWMF		storage	
	PSETSS		storage	
	WWMF		storage	
ONGOING	BNPD-CMLF	processing		
	Monserco	processing		
	AECL-CRL	processing	storage	
	BNPD-WWMF	processing	storage	
	AECL-WL		storage	
	BNPD-RWOS1		storage	
	HQWMF		storage	
	Pickering		storage	
	PLWMF		storage	

Figure 3: Example Groups Overview Report - Canada

International Atomic Energy Agency | Page 1 of 3 | NEWMDB Report

Reporting Group Government, Site Structure: LANL (A)

Country: United States of America | Reporting Year: 2004

Full Name: Los Alamos National Laboratory (B)

Location: Los Alamos, New Mexico (C)

License Holder(s) : U.S. Department of Energy, Albuquerque Operations Office, Los Alamos Area Office (D)

The following list the waste management facilities that are located at this site. (E)

Facility: TA-54 TRU (E1)

Description	TRU waste facilities (E2)

Processing part of the "TA-54 TRU" facility (E3)

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970

Storage part of the "TA-54 TRU" facility (E4)

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Capacity	1970-1979 in trenches; 1979-1991 on asphalt pads covered with soil; 1991-present in fabric domes; some RHTRU in shafts

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Buildings	building	1985	No	No	No	No
Berms	mound	1979	Yes	No	No	No
UG	trench (unlined)	1970	Yes	No	No	No

Figure 4: Example Site Structure Report – LANL Site USA (Part 1)
(please see Table 2)

International Atomic Energy Agency | Page 3 of 3 | NEWMDB Report

Reporting Group Government, Site Structure: LANL

Country: United States of America | Reporting Year: 2004

Facility: TA54 AreaG

Description	Area G disposal area, Technical Area 54; waste compactor is treatment

Processing part of the "TA54 AreaG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1945

Disposal part of the "TA54 AreaG" facility (E5)

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	1600000	Capacity -planned (m3)	1600000
% of existing capacity used	13.4	Depth (m)	2-20
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1957	1957
operation		1957	2070
closure	Yes	2070	2070
institutional control	Yes	2070	

Figure 5: Example Site Structure Report – LANL Site USA (Part 2)
(please see Table 2)

Table 2: Explanation of Site Structure Report in Figure 10 and Figure 11

Item in Figure 10	**Description**
(A)	**short name of the waste management site** (short names facilitate display of names on data input screens)
(B)	**full name of the site**
(C)	**location of the site** The IAEA does not allow the publication of locations that specify geographical co-ordinates. In addition, CCs can select whether or not they want locations to be made publicly available.
(D)	**license holder(s) for the site**
(E)	**list of waste management facilities at the site** Note: Full details of how CCs define waste processing and storage facilities at waste management sites are provided at the following Internet pages: http://www-newmdb.iaea.org/showhelp.asp?Topic=6-4-7 http://www-newmdb.iaea.org/showhelp.asp?Topic=6-4-8 The text that follows below provides a quick guide and should be adequate for most readers to understand the contents of a Site Structure report. **(E1): short name of the facility** **(E2): description of the facility** A facility may be processing (waste treatment and/or conditioning), storage or disposal, including any combination of these types (e.g., combined processing / storage). Figure 10 indicates a combined processing / storage facility (as indicated by both a “processing part” and a “storage part”). The following is from the NEWMDB’s on line glossary: **processing** any operation that changes the characteristics of waste, including pretreatment, treatment and conditioning **pre-treatment** any or all of the operations prior to waste treatment, such as collection, segregation, chemical adjustment and decontamination **treatment** operations intended to benefit safety and/or economy by changing the characteristics of waste. Three basic treatment objectives are: - volume reduction; - removal of radionuclides from the waste; and - change of composition. **conditioning** operations that produce a waste package suitable for handling, transport, storage and/or disposal Conditioning may include the conversion of the waste to a solid waste form, placement of the waste in containers and, if necessary, providing an overpack. **(E3): details of the processing part of a facility** • if waste is stored in the processing facility, CCs indicate which classes are stored by checking Actual boxes; checking an Actual box forces an inventory data input screen for the waste class in the waste data part of a submission; checking the planned box indicates that there are plans to store additional wastes beyond the current report year • if SRS are stored, CCs check the Actual box; checking the planned box indicates that there are plans to store additional SRS beyond the current report year • list SRS (yes/no): A yes answer forces an SRS input screen in the waste data part of a submission. • type (treatment and/or conditioning) • year opened: the purpose of this data field is to create statistics on the ages of facilities

	(E4) details of the storage part of a facility • CCs indicate which classes are stored by checking Actual boxes; checking an Actual box forces an inventory data input screen for the waste class in the waste data part of a submission; checking the planned box indicates that there are plans to store additional wastes beyond the current report year • if SRS are stored, CCs check the Actual box; checking the planned box indicates that there are plans to store additional SRS beyond the current report year • list SRS (yes/no): A Yes answer forces an SRS input screen in the waste data part of a submission. • capacity: the intent of this field was to have CCs comment on whether or not capacity was sufficient for the foreseeable future; however, some CCs used the field to put general comments about the facility • list of storage units and their parameters; if list SRS = yes, at least one storage unit must indicate Contains SRS
Item in Figure 11	**Description**
	(E5) details of the disposal part of a facility Note: Full details of how CCs define disposal facilities at waste management sites are provided at the following Internet page: http://www-newmdb.iaea.org/showhelp.asp?Topic=6-4-10 The text that follows below provides a quick guide and should be adequate for most readers to understand the contents of a Site Structure report. • CCs indicate which classes are disposed by checking Actual boxes; checking an Actual box forces an inventory data input screen for the waste class in the waste data part of a submission; checking the planned box indicates that there are plans to dispose additional wastes beyond the current report year • if SRS are disposed, CCs check the Actual box; checking the planned box indicates that there are plans to dispose additional SRS beyond the current report year • list SRS (yes/no): A yes answer forces an SRS input screen in the waste data part of a submission. • type: CCs select the type of disposal facility from a “pick list” • modular (yes/no): CCs indicate if a facility is modular or not (i.e., is there a planned expansion?) • capacity: both existing and planned capacity are specified (for non modular, these are usually equal) • % capacity used and depth of facility: self explanatory fields • host medium: CCs specify the geology surrounding the repository • phase: CCs indicate the various phases in which a repository is implemented

The “Site Data” Report

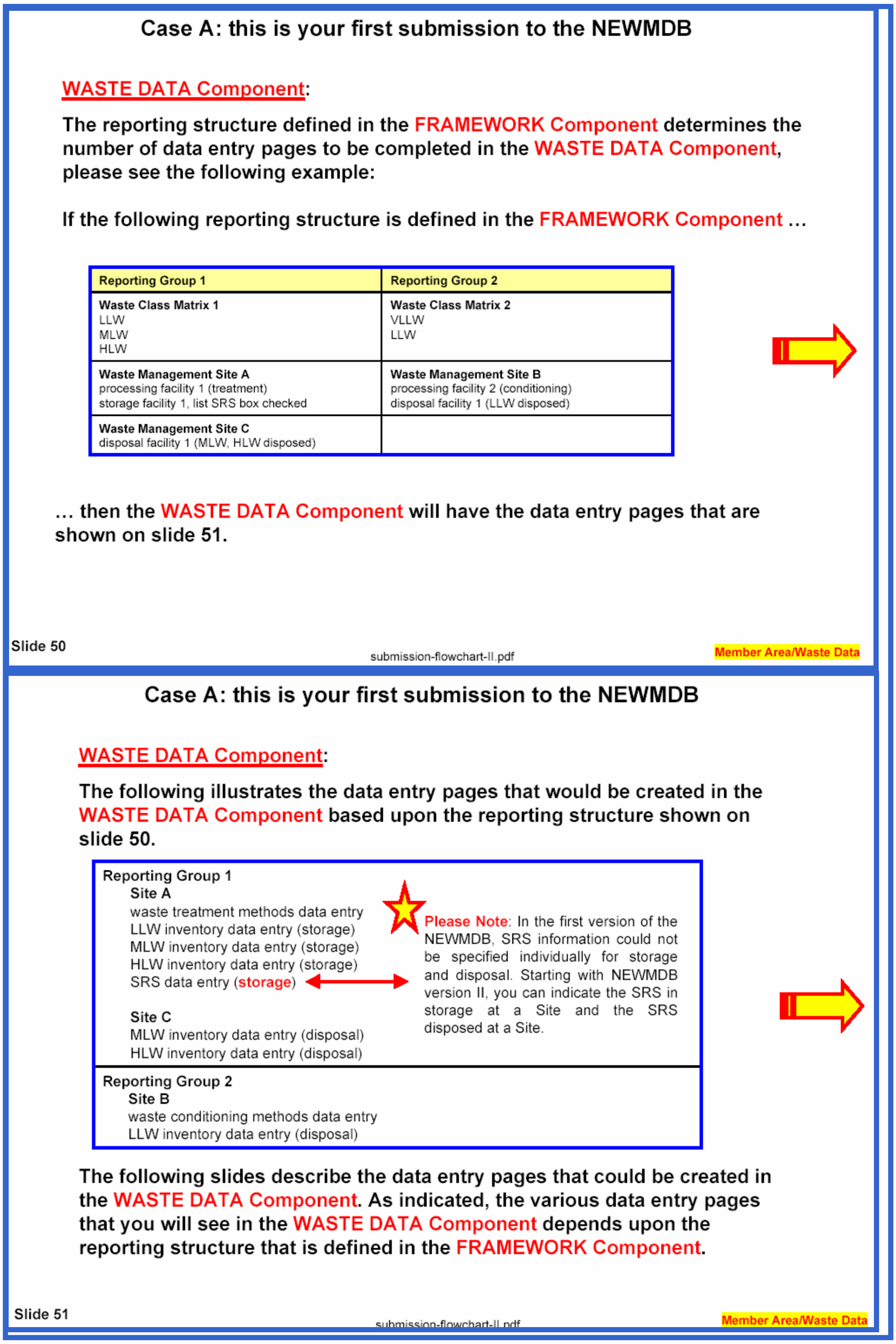
Figure 11 illustrates the relationship between the reporting structure that is defined by a Country Co-ordinator and the waste data screens that are created to input information for his/her country’s submission to the NEWMDB. Figure 11 is from the English version of the submission flowchart that was developed to assist CCs with preparing their submissions to the NEWMDB. As noted in the Introduction to the 8th “*Radioactive Waste Management Profiles*”, the submission flowcharts are available in all IAEA Official Languages (Arabic, Chinese, English, French, Spanish and Russian). Flowcharts can be accessed via the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=17-1-1

Figures 12 through 15 and Table 3 illustrate part of the Site Data report for the RWMF site in the CPHR reporting group in the submission from Cuba (2004). Full details of Site Data information are provided at the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=7-1-5

The information below provides a quick guide to the Site Structure report.



Case A: this is your first submission to the NEWMDB

WASTE DATA Component:

The reporting structure defined in the FRAMEWORK Component determines the number of data entry pages to be completed in the WASTE DATA Component, please see the following example:

If the following reporting structure is defined in the FRAMEWORK Component …

Reporting Group 1	Reporting Group 2
Waste Class Matrix 1 LLW MLW HLW	**Waste Class Matrix 2** VLLW LLW
Waste Management Site A processing facility 1 (treatment) storage facility 1, list SRS box checked	**Waste Management Site B** processing facility 2 (conditioning) disposal facility 1 (LLW disposed)
Waste Management Site C disposal facility 1 (MLW, HLW disposed)	

… then the WASTE DATA Component will have the data entry pages that are shown on slide 51.

Slide 50

submission-flowchart-II.pdf

Member Area/Waste Data

Case A: this is your first submission to the NEWMDB

WASTE DATA Component:

The following illustrates the data entry pages that would be created in the WASTE DATA Component based upon the reporting structure shown on slide 50.

Reporting Group 1
Site A
waste treatment methods data entry
LLW inventory data entry (storage)
MLW inventory data entry (storage)
HLW inventory data entry (storage)
SRS data entry (storage)

Site C
MLW inventory data entry (disposal)
HLW inventory data entry (disposal)

Please Note: In the first version of the NEWMDB, SRS information could not be specified individually for storage and disposal. Starting with NEWMDB version II, you can indicate the SRS in storage at a Site and the SRS disposed at a Site.

Reporting Group 2
Site B
waste conditioning methods data entry
LLW inventory data entry (disposal)

The following slides describe the data entry pages that could be created in the WASTE DATA Component. As indicated, the various data entry pages that you will see in the WASTE DATA Component depends upon the reporting structure that is defined in the FRAMEWORK Component.

Slide 51

submission-flowchart-II.pdf

Member Area/Waste Data

Figure 6: Site Structure – Site Data Relationship

International Atomic Energy Agency — Page 1 of 3 — NEWMDB Report

Reporting Group CPHR, Site Data: RWMF

Country: Cuba, Republic of — Reporting Year: 2004

Full Name: Radioactive Waste Management Facility ← site name

Inventory Reporting Date: December 2004 — Waste Matrix: IAEA Def. ← waste class scheme

Waste Inventory **(A)**

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

Class **(B)**	Location **(C)** Form	Proc. **(D)**	Volume (m3) **(E)**	Distribution in % **(F)**							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage Liquid	No	4	0	0	0	100	0	0	0	No
LILW-SL	Storage Solid	No	32.8	0	0	0	40	0	60	0	No
LILW-SL	Storage Solid	Yes	3	0	0	0	100	0	0	0	No
LILW-LL	Storage Solid	No	2.2	0	0	0	0	0	100	0	No
LILW-LL	Storage Solid	Yes	0.2	0	0	0	0	0	100	0	No

Processing - Treatment method(s)

Method **(G)**	Status **(H)**			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			decrease	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation	Yes			
Containerization			same	

Figure 7: Example Site Data Report – RWMF Site Cuba (Part 1)
(please see Table 3)

Spent Sources <=30 years in storage (A)

Nuclide (B)	Number of Sources/Total Activity of Sources (GBq) (C)			c o n d	u n c o n d (D)	c a t .	Total Activity for all Groups (GBq) (E) (F)	Decay Date (G)
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cs-137		361		Yes	No	3	2.82E+04	
		2.82E+04						
Cs-137		13		No	Yes	2	1.87E+03	
		1.87E+03						
Cs-137		91		Yes	No	2	1.20E+04	
		1.20E+04						
Cs-137		5		Yes	No	1	2.12E+04	
		2.12E+04						
Cs-137	25			No	Yes	5	3.00E+00	
	3.00E+00							
Pb-210	70			Yes	No	5	1.00E-03	
	1.00E-03							
Kr-85	205			No	Yes	5	1.50E+00	
	1.50E+00							
Kr-85	21			Yes	No	5	1.00E+00	
	1.00E+00							
Sr-90	57			No	Yes	5	4.00E+00	
	4.00E+00							

Figure 8: Example Site Data Report – RWMF Site Cuba (Part 2)
(please see Table 3 for notes)

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		c o n d	u n c o n d	c a t .	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Pu-239 Neutron Gen.		6	No	Yes	3	1.09E+03	
		1.09E+03					
Pu-238 Neutron Gen.		5	No	Yes	3	2.43E+02	
		2.43E+02					
Am-241 Neutron Gen.		4	No	Yes	3	6.30E+02	
		6.30E+02					
Am-241 Neutron Gen.	9		No	Yes	4	1.10E+01	
	1.10E+01						
Am-241	12747		No	Yes	5	1.10E+01	
	1.10E+01						
Am-241	8	7	No	Yes	4	5.20E+01	
	1.30E+01	3.90E+01					
Ni-63	4		Yes	No	5	1.60E+00	
	1.60E+00						
Pu-239	25		No	Yes	5	2.00E-02	
	2.00E-02						
Ra-226	1005		No	Yes	4	1.70E+02	
	1.70E+02						

Figure 9: Example Site Data Report – RWMF Site Cuba (Part 3)

Multiple Nuclides Spent Sources in storage

Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
Am-241	1.000E-03	No	Yes	4	
Sr-90	1.000E-03				

Figure 10: Example Site Data Report – RWMF Site Cuba (Part 4)

Table 3: Explanation of the Site Data Report in Figure 12 through Figure 15

Item in Figure 12	**Description**
(A)	**Inventory report table** Each Reporting Group is assigned a waste class matrix, which identifies one or more waste classes. The inventory report table is used to indicate the total volume of waste for each class of waste at each waste management site in the Reporting Group (if a site has multiple waste management facilities, the default situation is to report only the total volume in all facilities). See item (C) below
(B)	name of waste class
(C)	**location (storage or disposal), facility (optional) and waste form (optional)** CCs can decide to report waste inventories according to the following options: (1) total waste at the site reported for each class of waste (2) total waste in each facility at the site reported for each class of waste (3) total liquid and/or solid waste at the site for each class of waste (4) combinations of the above options
(D)	**processing status** (Yes = waste is processed, No = waste is not processed) In its current implementation, the processing status only indicates if the waste is “as generated” (unprocessed) or if some treatment and/or conditioning has been performed.
(E)	**volume of waste in m^3**
(F)	**distribution of waste by origin** The purpose of this field is to indicate the amounts of waste that have relatively consistent characteristics versus those that may have more widely varying characteristics. This can be useful for estimating future requirements for managing wastes. For example, many wastes from nuclear power plants (reactor operations waste) have relatively consistent characteristics. Therefore, knowledge of today’s wastes can be used to estimate the inventories (volumes, radionuclides, chemical properties, etc) of future wastes. On the other hand, there may be large uncertainties about the characteristics of decommissioning wastes, notably if different types of facilities are to be decommissioned (i.e., knowledge of today’s decommissioning wastes may not be a good indicator of the inventories of future decommissioning wastes). Many Member States, even those with advanced data management systems, do not track wastes according to the origins indicated. Therefore, the percentages reported may be best estimates (the “Est” column indicates these cases). The origin of some or all of the waste may not be known or assessed. The “ND” column is used to indicate this situation.
(G)	**list of treatment methods at the site or list of conditioning methods at the site** (see Figure 13); CCs choose methods from a pick list of methods
(H)	**implementation/usage status for the treatment or conditioning method**

Planned	R&D	Current	Past
X			
	X		
		X	
			X
X			X
	X		X
	X	X	

	If Planned = "Yes", the Member State plans to use the method in the future but it does not currently use the method nor does it have an R&D programme in place for the method. Database rules require that Planned must be "No" if R&D = "Yes" and/or Current indicates that the method is currently in use. R&D = "Yes" indicates that the Member State has an active research and development programme for the method. The Member State can indicate that it has an R&D programme even though the method is currently in use (e.g., for improving the method). Current = decrease, same, increase, suspended or intermittent: If the method is currently in use, the Member State indicates if there is a change in usage over the last five years. The values increase, same and decrease are relative indicators. The following Internet page illustrates how to select the value: http://www-newmdb.iaea.org/showhelp.asp?Topic=7-3-2 Past practice = "Yes" if the Member State had used the method in the past but currently the method is no longer in use (excludes suspended or intermittent, implies no intention to reuse the method).
Item in Figure 13	**Description**
(A)	**SRS inventory report table** Spent/disused sealed radioactive sources (SRS) were handled as a special case in the NEWMDB for two reasons: (1) For some Member States, the only radioactive wastes requiring management are (a) wastes that can undergo delay/decay and be released as non-radioactive waste and (b) spent/disused SRS. Typically the volumes of spent/disused SRS are small but the hazard can be high (such as high activity Co-60 SRS or long-lived radium SRS). If these Member States were to report only volumes of waste (see Figure 12), the low volumes would not be indicative of the risk involved and the waste management efforts needed to deal with SRS. (2) Accidents with spent/disused SRS account for a significant proportion of all radiation accidents. Accidents occur because SRS fall out of regulatory or operational control, for example they get lost or abandoned, and they are discovered by persons who are unaware of the risks they pose. Therefore, some Member States felt that it was necessary to include lists of spent/disused SRS in the NEWMDB. However, often there is confusion about the relationship between controlling SRS and the purpose of waste management databases, like the NEWMDB. The tracking and accounting of individual SRS before they reach waste management facilities is important to ensure that they do not fall out of regulatory or operational control. However, once they reach waste management facilities, there is no strict need to track all SRS individually. For example, some Member States' waste management facilities accept hospital, university, industrial and/or research facility wastes that contain SRS as a component of waste packages. A 210L drum may contain items such as paper, cloth, and glass contaminated with radionuclides and it may also contain a number of small activity, low hazard SRS. Typically, a package is tracked in a waste management facility, not the individual items in the package. While a package's characteristics may be entered into a database (such as the amount of Cs-137 in the package), the Cs-137 may derive from one or more SRS in the package as well as from other items. The result is that some waste management facilities may not maintain a complete listing of individual SRS they possess. This is especially true for wastes managed over many years when SRS tracking was not the issue it is today. For many large waste management organizations, "waste is waste" and only "significant" SRS may be tracked individually. These organizations would not be able to report a comprehensive list of the SRS in their storage or disposal facilities. The above discussion indicates that the provision of lists of SRS to the NEWMDB will not result in the compilation of a complete list of SRS in IAEA Member States. For the foreseeable future, the provision of lists of SRS to the NEWMDB could be considered as a valuable source of information for (a) Member States where spent/disused SRS are the most significant (or only) wastes managed and (b) Member States that report only inventories of highest hazard SRS. The inventories of spent/disused SRS are reported in two groups: (1) SRS with half lives less than or equal to the half life of Cs-137 (30.12 years, nominally indicated in the database as 30 years – see Figure 13) and (2) SRS with half lives greater than the half life of Cs-137 - Figure 14.

(B)	**name of radionuclide(s)** CCs can specify multi-radionuclide SRS – see Figure 15 where a single SRS with both Am-241 and Sr-90 is shown. Single SRS with up to four radionuclides can be specified.
(C)	**number of SRS and their activity** Based on manufacturing data for SRS, Member States were asked to identify SRS according to activity ranges. Item (C) in Figure 13 illustrates that there are three activity ranges for radionuclides with half lives less than or equal to 30 years. Figure 14 illustrates that there are two ranges for SRS with half lives greater than 30 years. In the IAEA's previous waste management database, Member States were asked to list individual SRS, which can be an enormous burden to do. The NEWMDB allows the input of groups of SRS, where the number of SRS in the group and their total activity is entered. PLEASE NOTE: grouping is according to the activity of individual SRS, it is not according to the total activity of SRS in the group. In the example in Figure 13, the average activity of SRS in a group (the total activity reported for the group divided by number of SRS in a group) must be within the range of activities for the group. The following is the Internet address to an Acrobat PDF file that provides examples of how Member States can group SRS in their NEWMDB submissions: http://www-newmdb.iaea.org/help/examples.pdf The activity of SRS or groups of SRS is reported in GBq.
(D)	**conditioning status** This field indicates whether or not SRS are in an "as generated" state or they have been conditioned. If SRS are grouped, the following combinations are valid: cond = No, uncond = Yes (all SRS unconditioned) cond = Yes, uncond = No (all SRS conditioned) cond = Yes, uncond = Yes (mix of unconditioned and conditioned SRS)
(E)	Member States have the **option** of categorizing sources according to the scheme in the Agency technical document IAEA-TECDOC-1344 (July 2003), "Categorization of Radioactive Sources"[8]. A value 0 indicates that the IAEA categorization scheme is not specified. Other pick list values indicate the relevant category in the cited technical document.
(F)	**total activity** the value in this field is calculated by an NEWMDB algorithm. It is the total activity reported for all radionuclides listed on the same line of the report. The activity is reported in GBq.
(G)	**decay date** Due to radioactive decay, the activity of SRS decline over time. This is particularly significant for SRS with half lives less than or equal to 30 years, especially for radionuclides like Co-60 (about 5 years). As such, it is common practice to report the activity of SRS as of a particular reference date to allow anyone to calculate the activity of the SRS at any future date relative to the reference date. The decay date field means that the activity cited for the identified SRS or group of SRS is the activity as of the cited date. If the decay date is an estimate, the word "estimate" appears in the report.

In the General Information part of the NEWMDB, CCs identify who regulates radioactive waste, the regulations/laws that are relevant to radioactive waste management, significant milestones in radioactive waste management in their countries, and radioactive waste management policies. The following describes the various reports that are created based on information entered by CCs. Note: None of the data fields are "required" – CCs decide what information will (or can) be provided. For example, a Member State may not have a regulator, it may not have any relevant laws, etc.

Figure 16 provides an example of a "Regulators report". Additional details can be accessed via the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=6-6-2

Figure 17 provides an example of a Regulations/Laws report. Additional details can be accessed via the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=6-6-4

Figure 18 provides an example of a "Milestones" report. Additional details can be accessed via the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=6-6-6

Figure 19 provides an example of a "Policies" report. Additional details can be accessed via the following Internet page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=6-6-9

International Atomic Energy Agency | Page 1 of 1 | NEWMDB Report

REGULATORS

Country: Hungary, Republic of | Reporting Year: 2003

Name	SPHAMOS
Full Name	State Public Health and Medical Officer's Service
Division	
City or Town	Budapest

Comment #6582: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix PNPP - HLW, LLW, MLW; Matrix PURAM - HLW, LLW, MLW

Name	HAEA
Full Name	Hungarian Atomic Energy Authority
Division	
City or Town	Budapest

Comment #6583: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix PNPP - HLW, LLW, MLW

Figure 11: Example of a Regulators Report (Hungary)

International Atomic Energy Agency | Page 1 of 1 | NEWMDB Report

REGULATIONS/LAWS

Country: Romania | Reporting Year: 2003

Name	111/1996	
Title or Name	Law 111/1996 (as amended) on safe conduct of nuclear activities	
Reference Number	111/1996	
Date Promulgated or Proclaimed	1996-12-28	Law

Comment #6608: Wastes that are regulated by the Law

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP waste - type 1, type 2, type 3

Name	RSFN	
Title or Name	Radiation Safety Fundamental Norms approved by the order of the President of National Commission for Nuclear Activities Control	
Reference Number	Order 14/2001	
Date Promulgated or Proclaimed	2000-08-29	Regulation

Comment #6609: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP waste - type 1, type 2, type 3

Figure 12: Example of a Regulations/Laws Report (Romania)

International Atomic Energy Agency	Page 1 of 1	NEWMDB Report	
	MILESTONES		
Country: Spain, Kingdom of		Reporting Year: 2003	
Start Year or Reference Year:	1951	End Year	
Description of Milestone			
The Nuclear Energy Board (JEN) was created as the organization in charge of all fields related to nuclear energy. In 1986 it was renamed CIEMAT.			
Start Year or Reference Year:	1964	End Year	
Description of Milestone			
The Spanish Nuclear Energy Law was enacted			
Start Year or Reference Year:	1968	End Year	
Description of Milestone			
The first Spanish NPP (C.N. Jose Cabrera) was connected to the grid			
Start Year or Reference Year:	1980	End Year	
Description of Milestone			
The Spanish Nuclear Safety Council was created			
Start Year or Reference Year:	1984	End Year	
Description of Milestone			
The Spanish Radioactive Waste Management Company (ENRESA) was created by Royal Decree			
Start Year or Reference Year:	1987	End Year	
Description of Milestone			
The Spanish First General Radioactive Waste Plan was approved by the Government.			

Figure 13: Example of a Milestones Report (Spain)

International Atomic Energy Agency	Page 1 of 5	NEWMDB Report
	Policies	
Country: Finland, Republic of		Reporting Year: 2003
National Systems		
	Policy	(Yes;Partially;No)
Has your Country implemented a national policy for radioactive waste management?		Yes
	Strategies	(Yes;Partially;No)
Has your country developed strategies to implement a national policy?		Yes
	Requirements	(Yes;Partially;No)
Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?		
identified the parties involved in the different steps of radioactive waste management		Yes
specified a rational set of safety, radiological and environmental protection objectives		Yes
implemented a mechanism to identify existing and anticipated radioactive wastes		Yes
implemented controls over radioactive waste generation		Yes
identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale		Yes

Figure 19: Example Policies Report (Partial) - Finland

References

[1] home page of the Net Enabled Waste Management Database (NEWMDB) http://www-newmdb.iaea.org

[2] top page for the NEWMDB's On-Line Help http://www-newmdb.iaea.org/help.asp

[3] Csullog, G.W., Pozdniakov, I., Shah, U., Kostitsin, V., Bell, M.J., "The International Atomic Energy Agency's Net-Enabled Waste Management Database", Waste Management 2001 Symposium, Tucson, Arizona, USA, February 2001.

[4] International Atomic Energy Agency, "Classification of Radioactive Wastes", Safety Guide, Safety Series 111-G-1.1, IAEA, Vienna, 1994.

[5] International Atomic Energy Agency, "Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management", Information Circular INFCIRC/456, 24 December 1997.

[6] Csullog, G.W., Pozdniakov, I., Bell, M.J., "Current Status of the IAEA's Net Enabled Waste Management Database", Waste Management 2003 Symposium, Tucson, Arizona, USA, February 2003.

[7] Csullog, G.W., Pozdniakov, I., "The IAEA's net enabled waste management database - Development and implementation of version II", Proceedings of Disposal Technologies and Concepts 2004 (DISTEC 2004), International Conference on Waste Disposal, 26-28 April, 2004

[8] International Atomic Energy Agency, "Categorization of Radioactive Sources". IAEA-TECDOC-1344 July 2003.

Instructions for Accessing Data from the NEWMDB's 2005 Data Collection Cycle

This document serves as an overview for accessing data compiled during the 2005 data collection cycle for the NEWMDB, which was conducted March – December 2006.

Background Information:

After data submissions have been completed and approved, they are published and become accessible via the NEWMDB's Public Area. Any member of the public can access the Public Area, however, registration is required (this was requested by some Member States during the development of the NEWMDB). Please refer to Figure 1 and Figure 2 regarding Public User registration.

Accessing Data:

Figure 3 to Figure 11 illustrate how to access published NEWMDB information after signing in as a Public User (note, Authorized Users do not have to sign in as Public Users if they are already logged in as Authorized Users).

Accessing information in Reading Rooms:

Figure 1 indicates "Click to receive Reading Room news". See Figure 12 to Figure 15 for an overview of the Reading Rooms feature and the "subscription" option.

For additional information about accessing publicly available information via the NEWMDB, please contact the NEWMDB Programme Officer via e-mail (NEWMDB@iaea.org).

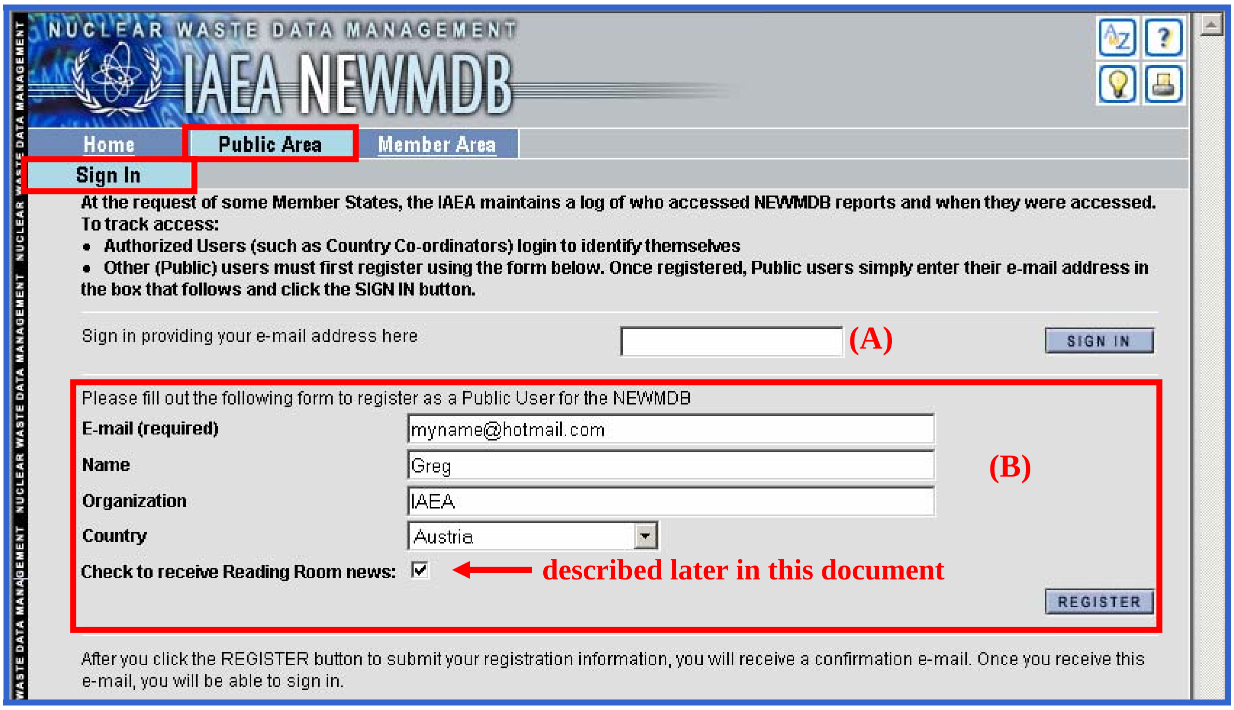


Figure 1: Public User registration screen

The above screen is displayed if a user clicks the Public Area tab and is not already signed in as a Public User or logged in as an Authorized User. If you have not registered as a Public User, you complete the form shown by (B) and click the REGISTER button. If you are already a registered user but currently not signed in, you enter the e-mail address your provided when you registered, as shown by (A), and you click the SIGN IN button.

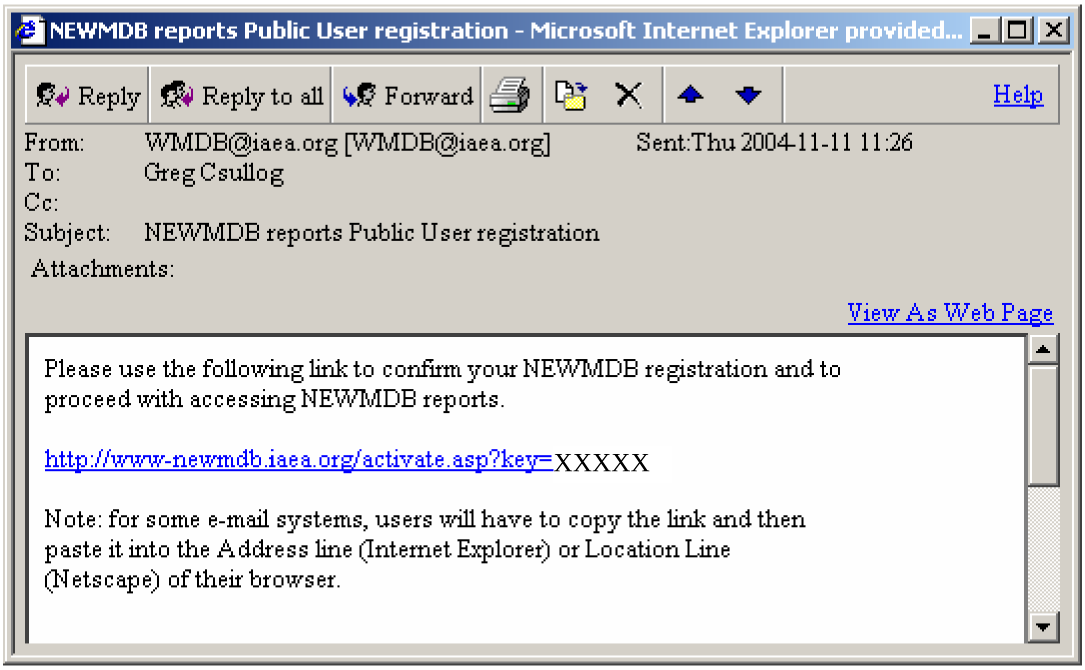


Figure 2: Example of a registration e-mail

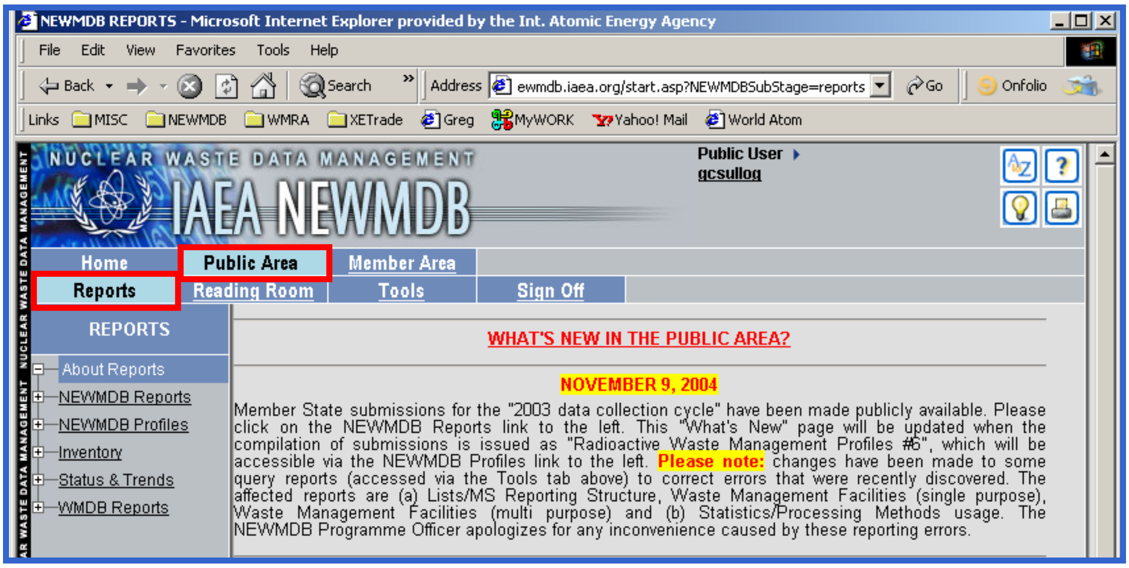


Figure 3: Top level page for the Public Area

If you are signed in as a Public User, when you click the Public Area tab, the top level page (Reports) for the Public Area will be displayed, as illustrated above.

As indicated in Figure 3, published reports are accessible via the REPORTS list in the left-hand column of the screen. Only part of the top level page for the Public Area is shown in Figure 3 – the remainder of the screen contains brief descriptions of the various reports that can be accessed.

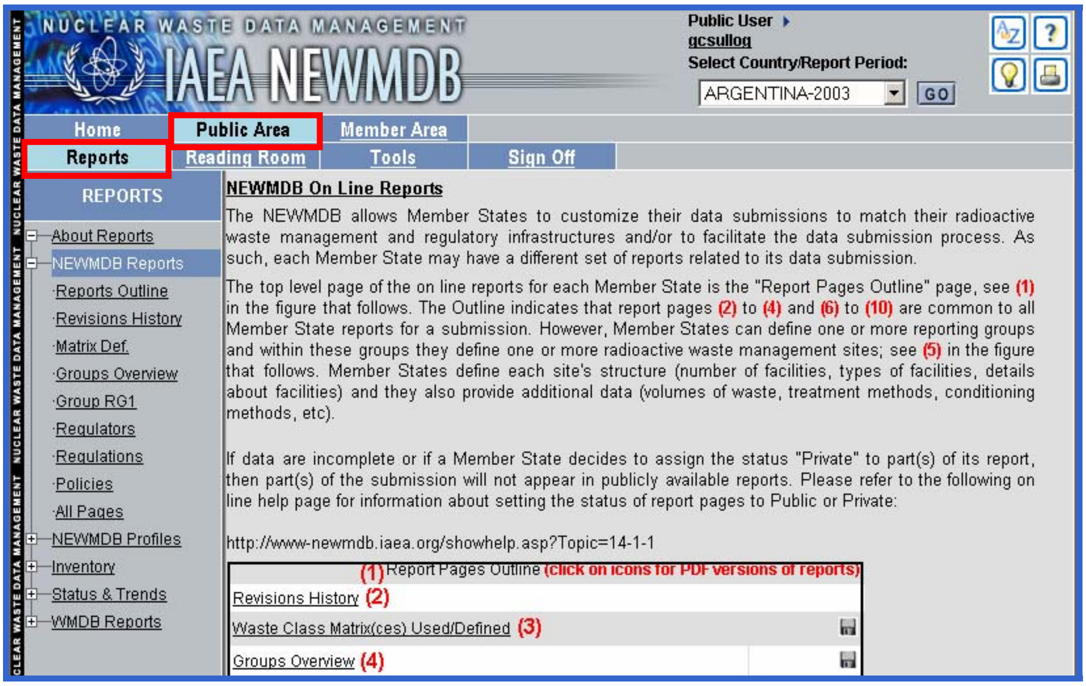


Figure 4: Top level page of NEWMDB On-Line Reports

The top level page for on line NEWMDB reports provides a brief description of the structure of on line reports, including a discussion of how the structure can vary for individual reports. Note that it is an explanation only and the example provided has no working links. To select a Country, go to the top right box, as shown below in Figure 5, and after making a selection (country and reporting year) click the "GO" button.

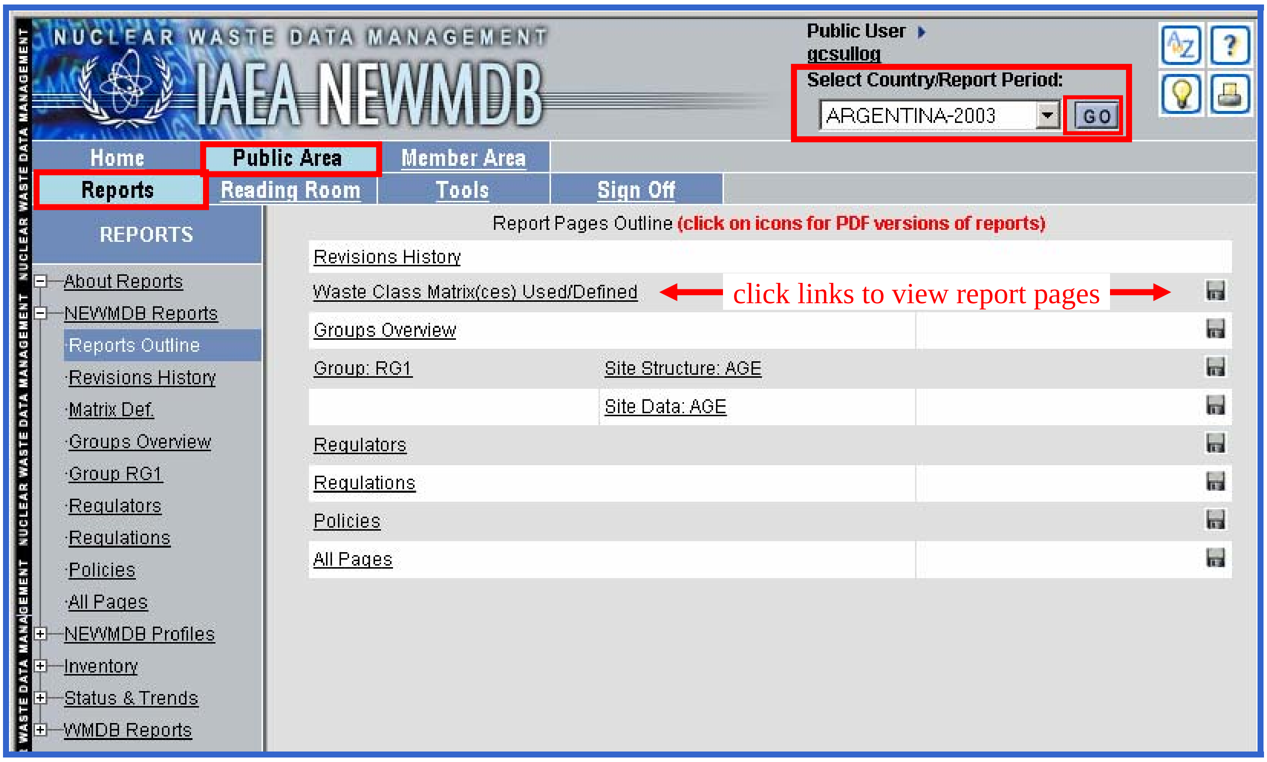


Figure 5: Example of the top level page for an individual Member State's on line report

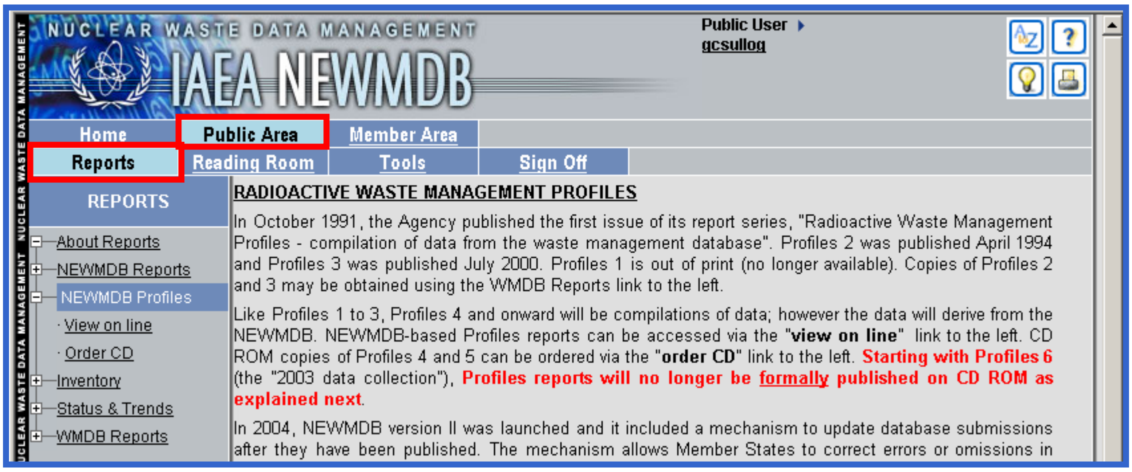


Figure 6: Top level page of NEWMDB Profiles Reports

The top level page for the Profiles reports explains how to access these reports on line and how to obtain CD ROM copies of reports (please take note of the red text in Figure 6).

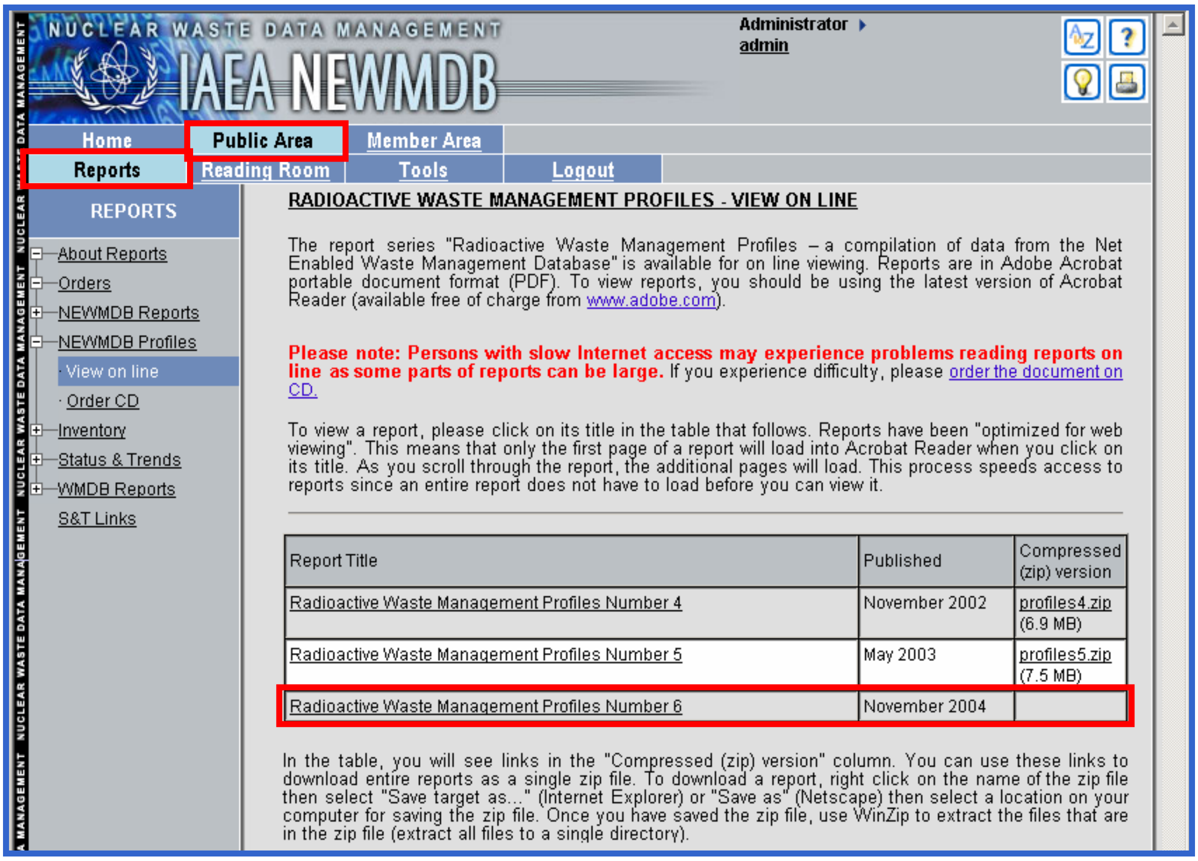


Figure 7: Access to viewing Profiles reports on-line

The following figures provide a quick overview of the utilities that provide Public Users with additional database reports.

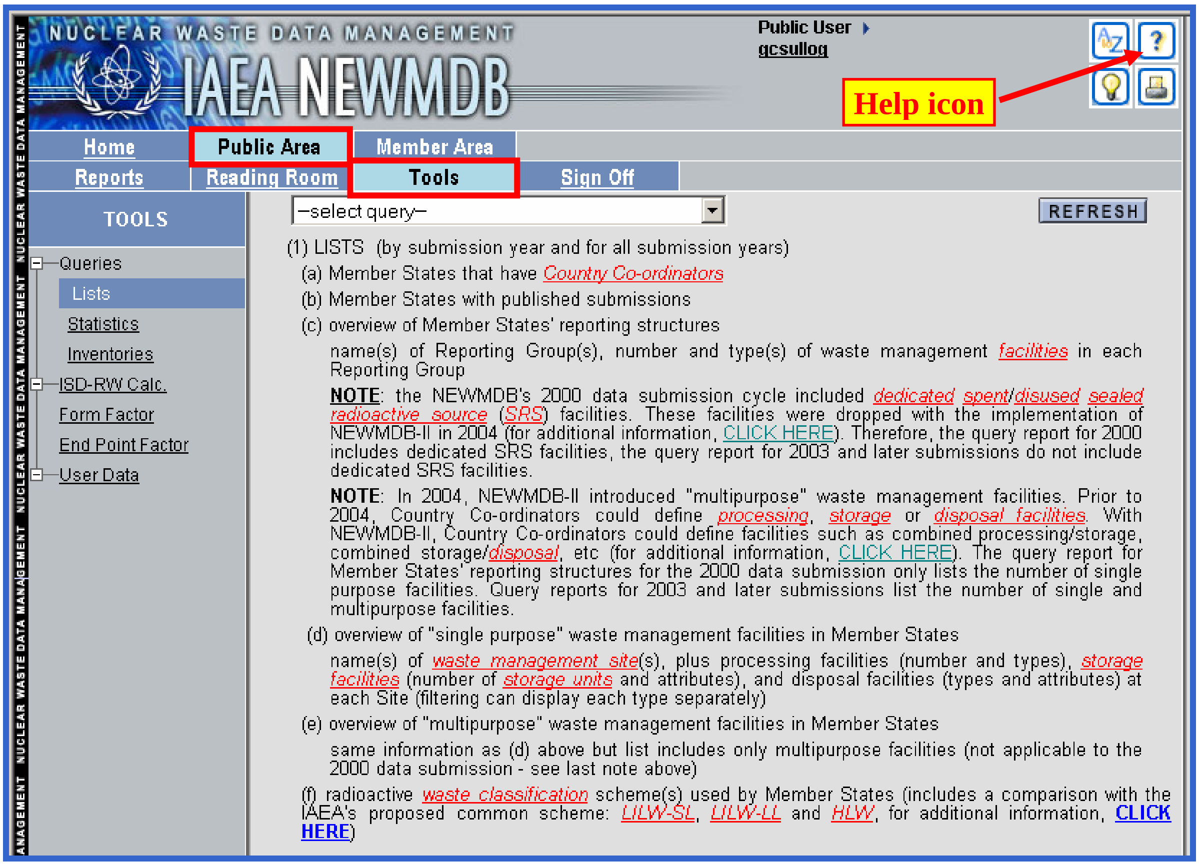


Figure 8: Top-level page for publicly available query tools

First, select the type of query from the menu on the left side. Then, select a query from the drop down list, and click the "REFRESH" button to display the query report. You can also click the Help icon for additional information about query tools.

The following figures provide examples of "Lists", "Statistics" and "Inventories" query reports.

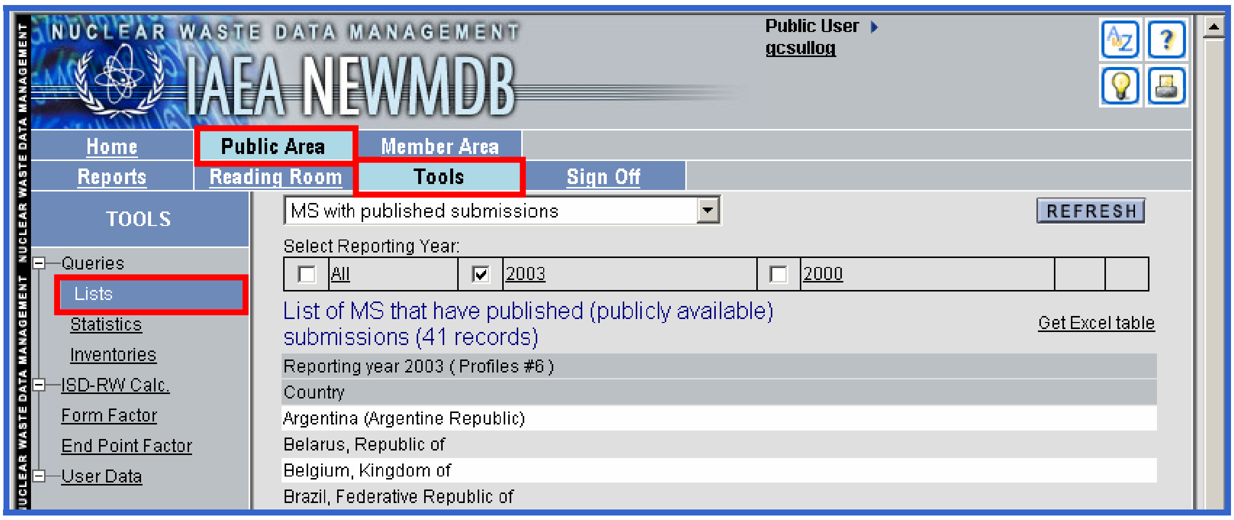


Figure 9: Example of a "Lists" query report

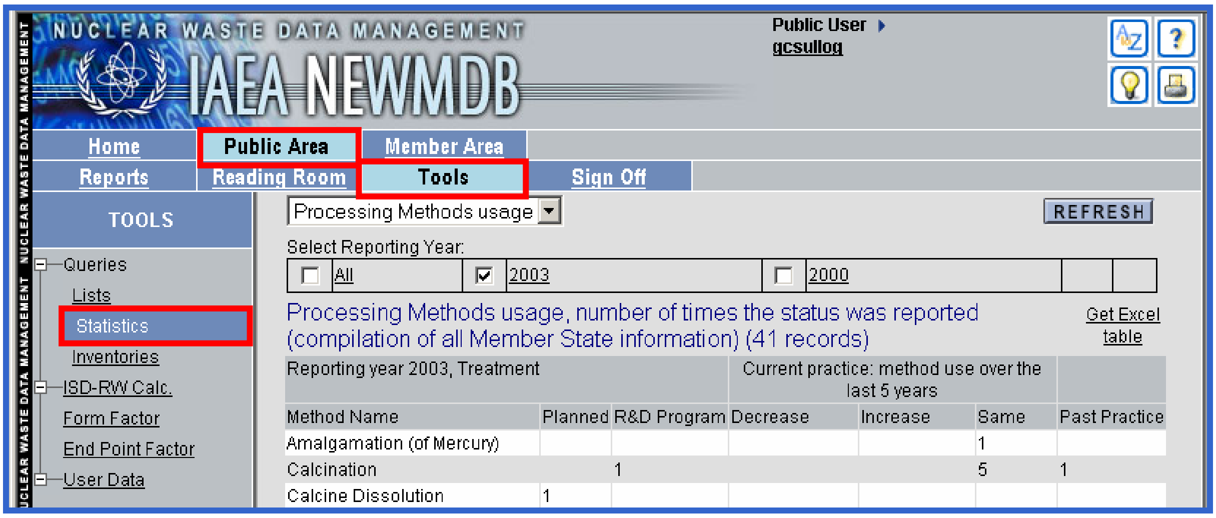


Figure 10: Example of a "Statistics" query report

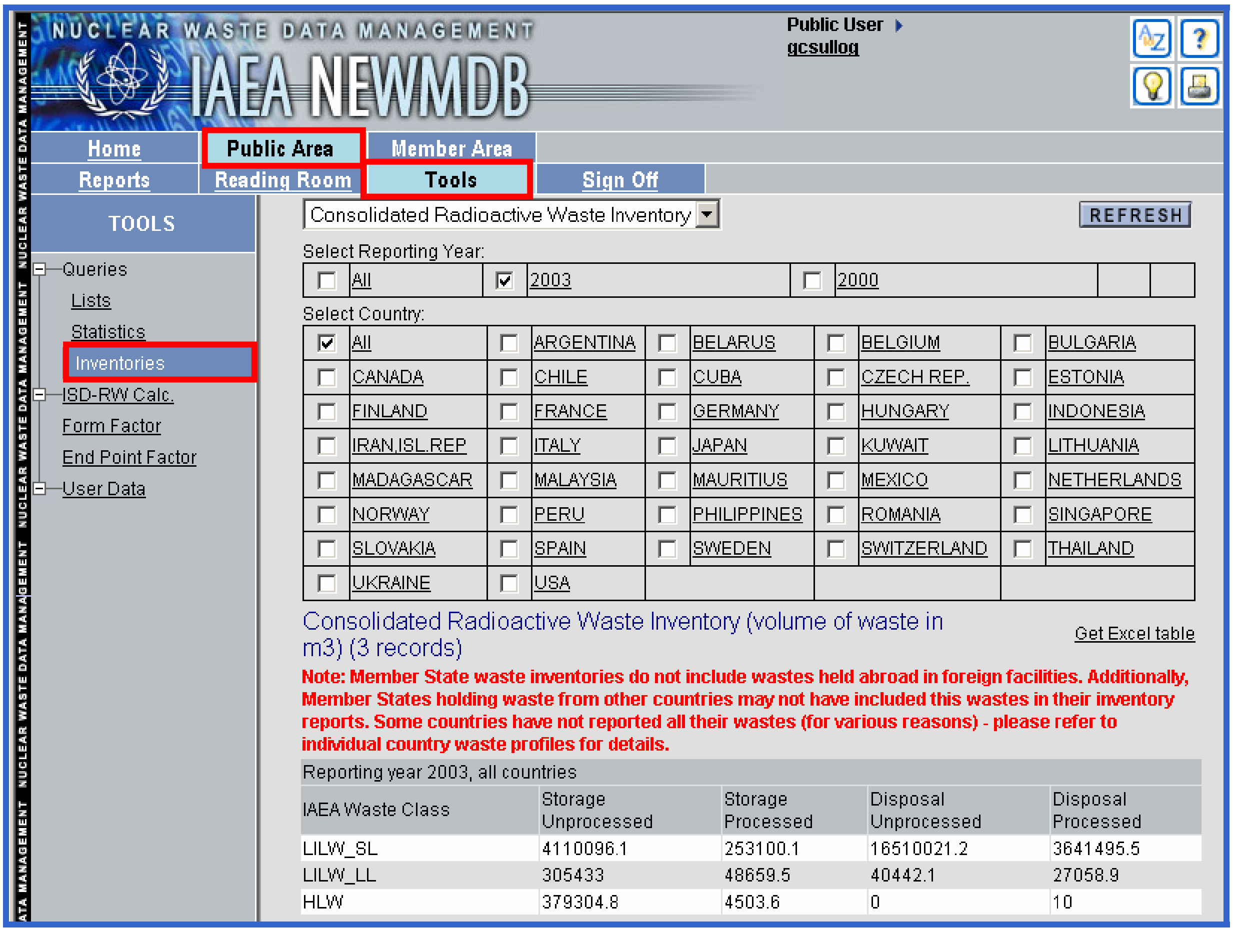


Figure 11: Example of an "Inventories" query report

The following figures provide an overview of the NEWMDB's "Reading Rooms" feature, including a description of subscribing/unsubscribing to/from reading room news.

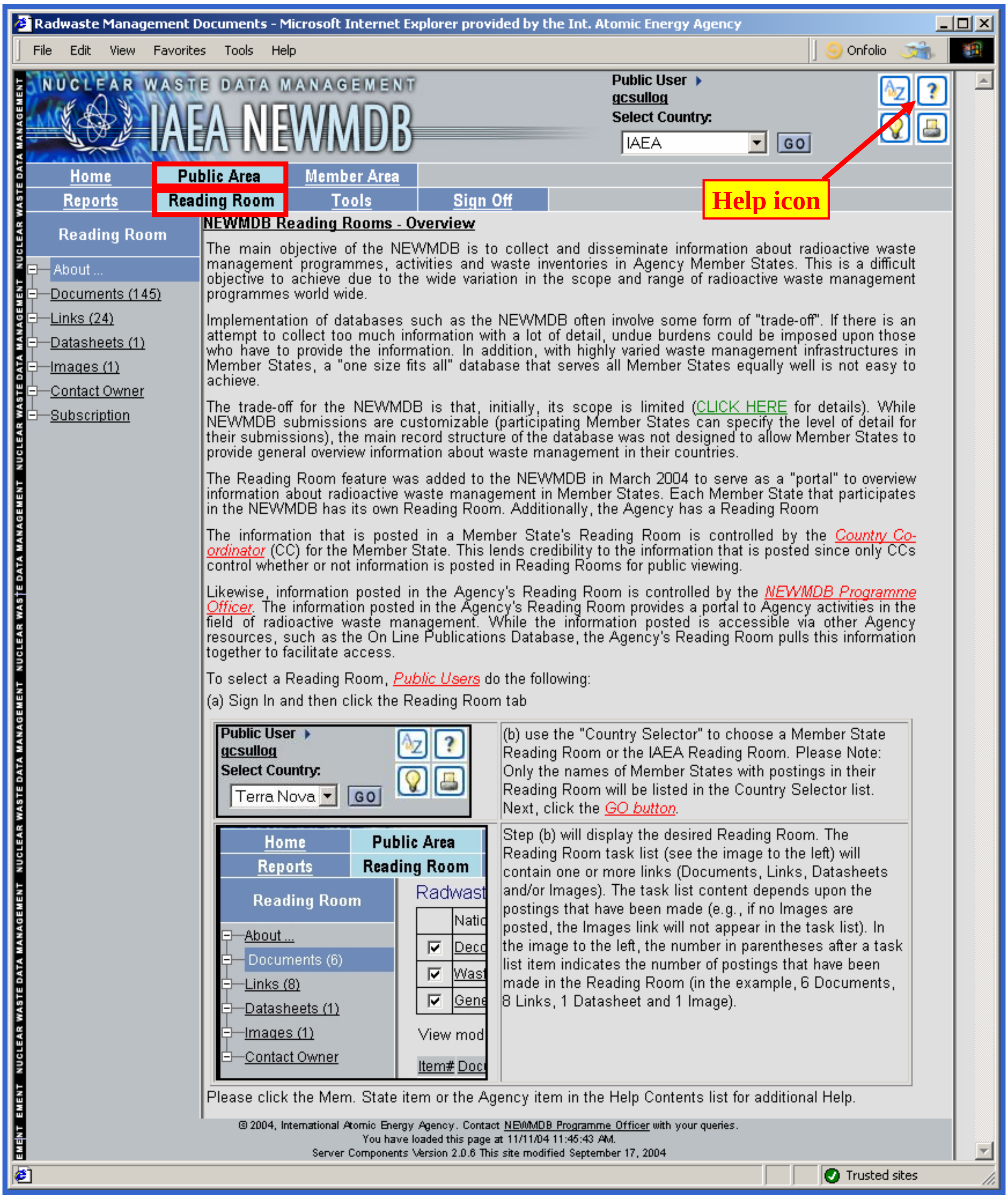


Figure 12: The Reading Room "About" screen

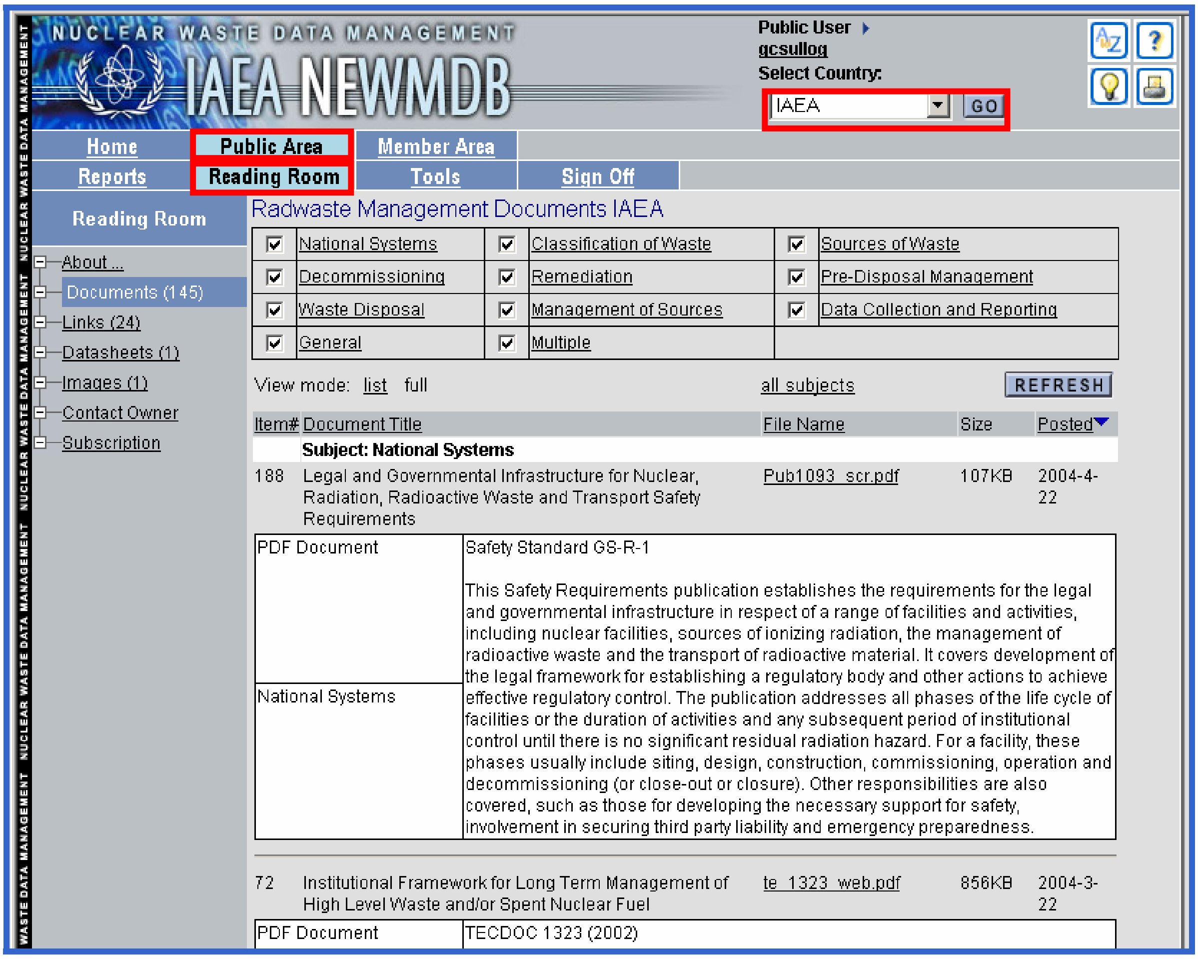


Figure 13: Reading Room example (IAEA)

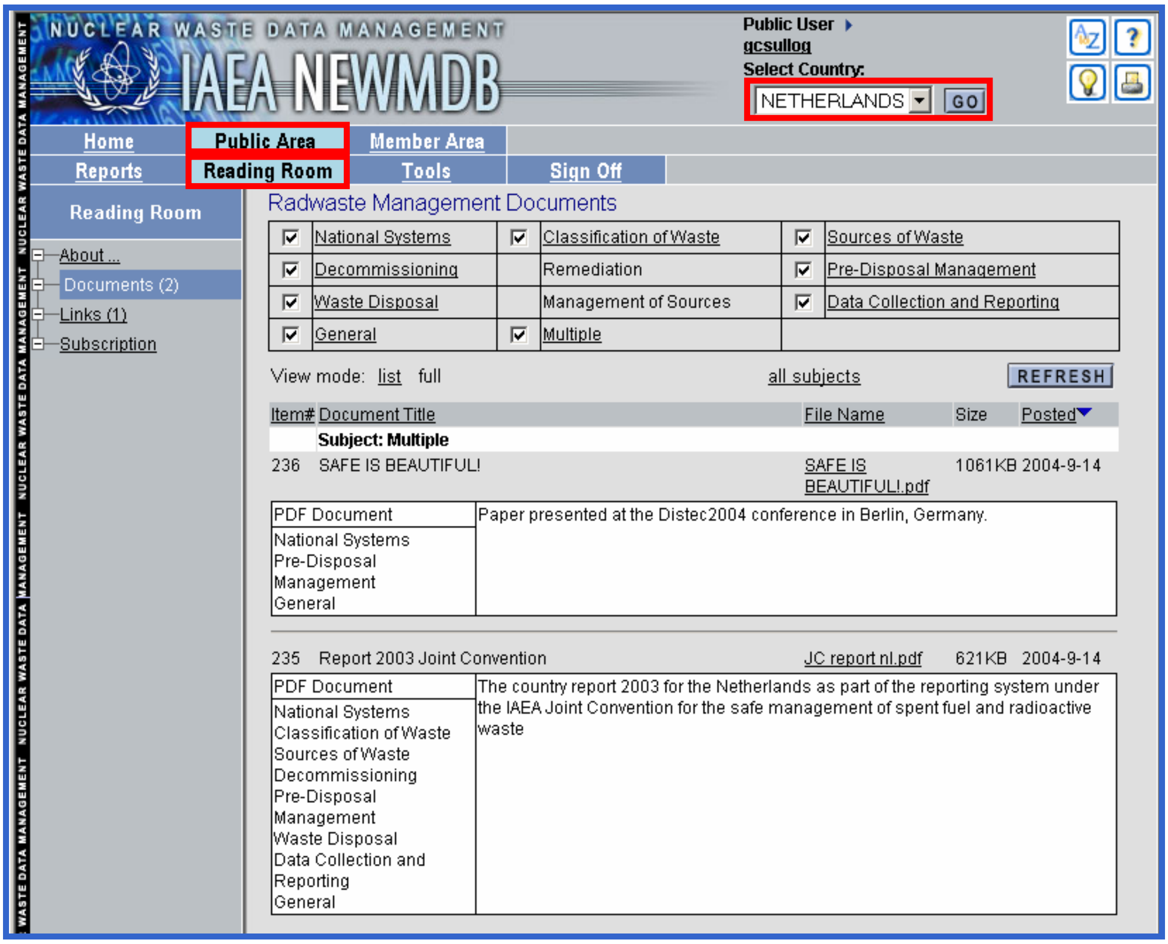


Figure 14: Reading Room example - Netherlands

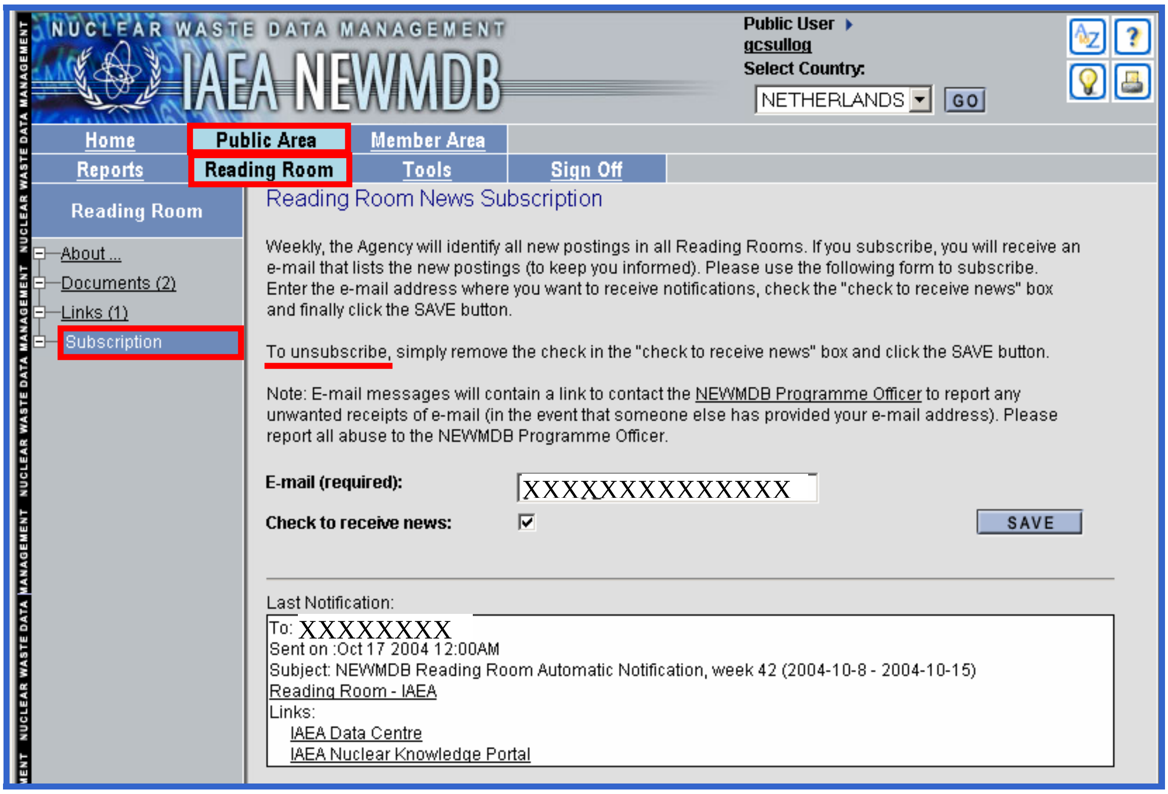


Figure 15: Setting your Reading Room news subscription status

OVERVIEW REPORT: Consolidated Radioactive Waste Inventory Report

One of the fundamental features of the NEWMDB is that it allows Member States to report their waste inventories according to the radioactive waste classification scheme(s) used in their own countries. However, the NEWMDB requires Member States to describe how their radioactive waste classification scheme(s) compare with the common radioactive classification scheme proposed by the IAEA [1]. Member States use the NEWMDB's waste class matrix tool to make this comparison.

An overview of the waste class matrix is provided in a brief slide show that can be accessed via the following Internet address (requires Internet Explorer 4.0 or higher):

http://www-newmdb.iaea.org/help/GC2004/wmdb-doc-series2_files/frame.htm

A brief discussion of the waste class matrix tool is also provided in the "*Guide to Reading Member State 'Country Waste Profile' Reports*", which is part of the 8th "*Radioactive Waste Management Profiles*" report.

Member States participating in submitting information to the NEWMDB were asked to appoint a single point-of-contact, called a Country Co-ordinator, to interact directly with the NEWMDB's Programme Officer. Country Co-ordinators are responsible for completing the waste class matrix on behalf of their country.

The waste class matrices completed by Country Co-ordinators allow the IAEA to convert Member States' waste inventories into the IAEA proposed waste classes in order to compile a radioactive waste inventory using a single waste classification scheme, thus allowing for "apples-to-apples" comparison between Member States and regions.

With the implementation of query tools in NEWMDB, there is no longer a need to publish a consolidated inventory report within the "*Radioactive Waste Management Profiles*" report series. Any Public User can access the NEWMDB via the Internet and query the database to get the latest consolidated radioactive waste inventory report, as described next:

- Register as an NEWMDB Public User (if not already done) - Note: Instructions for accessing the Public Area are provided in the "*Guide to Reading Member State 'Country Waste Profile' Reports*", which is part of the 8th "*Radioactive Waste Management Profiles*" report.
- Access the NEWMDB Home Page (http://www-newmdb.iaea.org).
- Click on the Public Area tab, sign in if not already signed in, and then click on the Tools tab.
- As illustrated in Figure 2, select the Inventories query, see **(A)** [the web page will update when the link is clicked], select the consolidated inventory query from the pick list, see **(B)**, check the desired NEWMDB Reporting Year(s), see **(C)**, and click the Refresh button, see **(D)**.

The last actions above will, by default, display the total inventory of radioactive waste reported by all the listed Member States for the selected NEWMDB Reporting Year(s) reported according to the IAEA's proposed common waste classification scheme. Users can select a single country or groups of countries to see the inventory in the selected country/countries reported according to the common scheme.

As noted in Figure 1, the 2nd consolidated waste inventory report was based on all waste inventory data entered by Member States in the 2nd NEWMDB data collection cycle, regardless of whether some inventory data were not made publicly available (see next paragraph). For the on-line inventory reports, the consolidated inventory is compiled only from data that are part of NEWMDB published submissions.

In some cases, not all parts of a Member State's submission to the NEWMDB are made publicly available. For example, "draft" data may be entered while validation is pending. The Member State may choose to make the information publicly accessible and provide a comment that the data are under review or it may choose to keep this information "private" (not part of the published report).

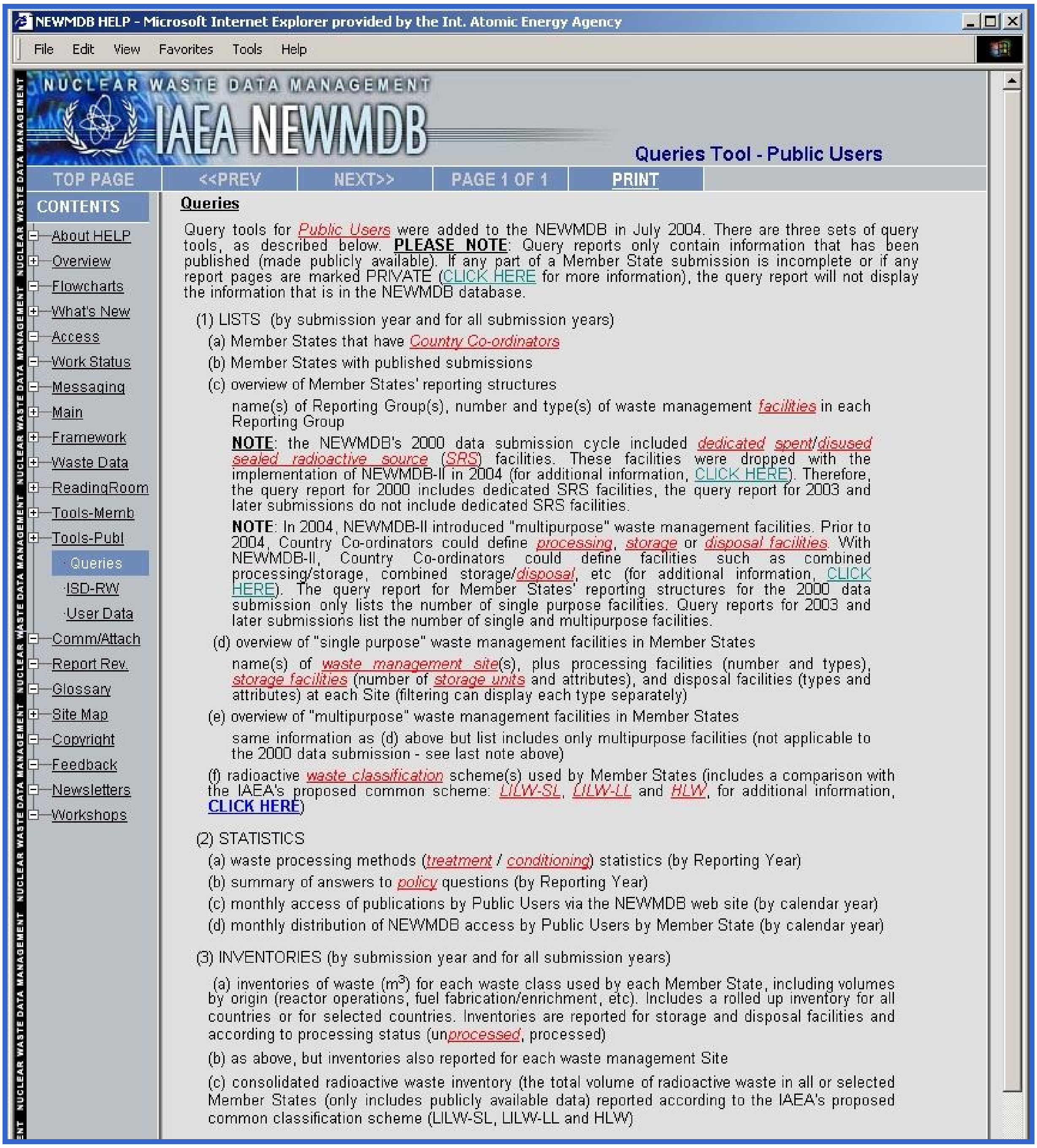


Figure 1: On-Line Help for Query Tools in the Public Area

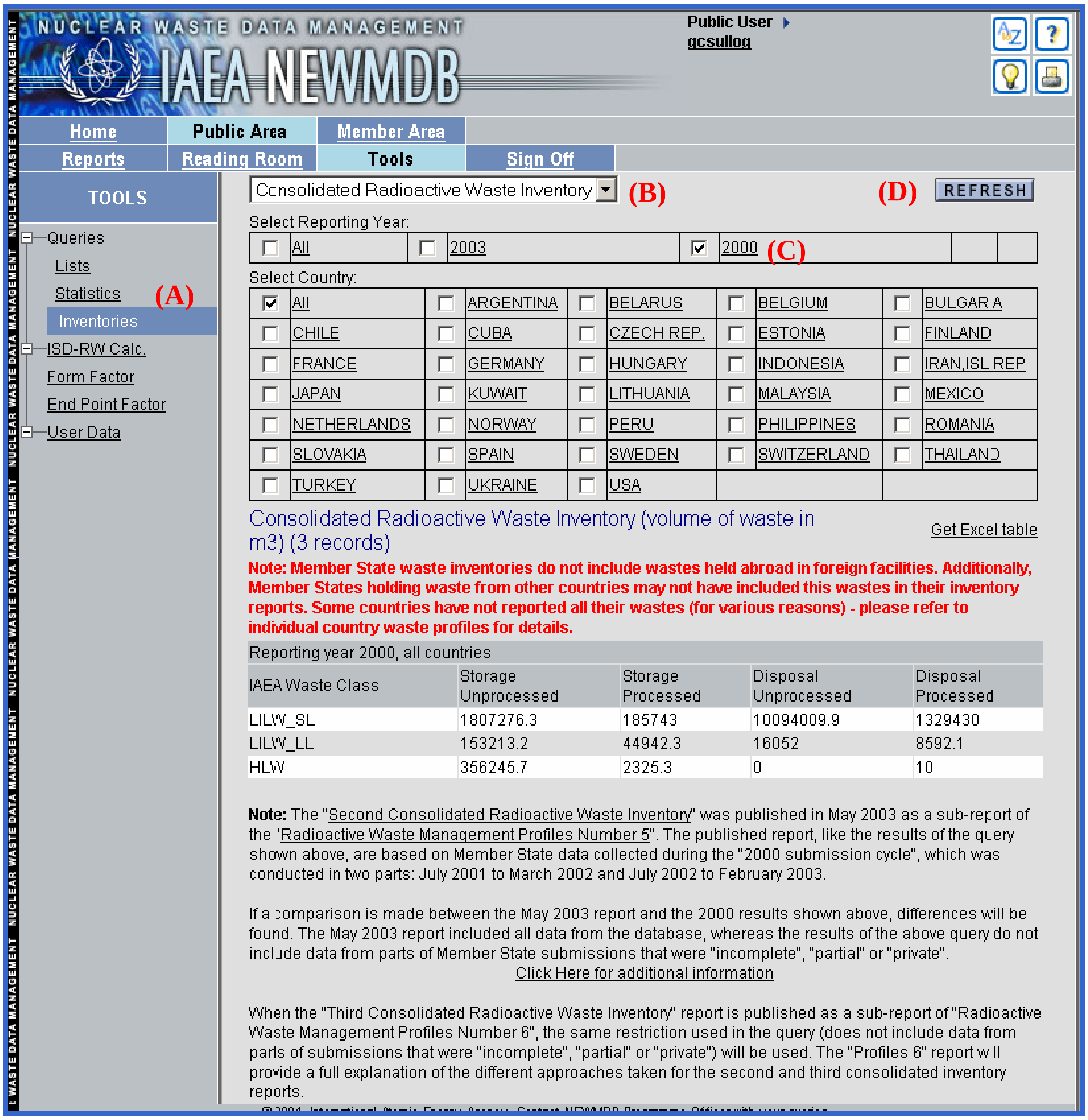


Figure 2: Consolidated Radioactive Waste Inventory Query

REFERENCES

[1] International Atomic Energy Agency, "Classification of Radioactive Wastes", Safety Guide, Safety Series 111-G-1.1, IAEA, Vienna, 1994.

[2] Csullog, G.W., Pozdniakov, I., "The IAEA's net enabled waste management database - Development and implementation of version II", Proceedings of Disposal Technologies and Concepts 2004 (DISTEC 2004), International Conference on Waste Disposal, 26-28 April, 2004

The Joint Convention and the NEWMDB

One of the IAEA's objectives for developing the Net-Enabled Waste Management Database (NEWMDB) was to conform, to the greatest extent practicable, with the reporting requirements of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the Joint Convention) [1]. The use of an international database, like the NEWMDB, to collect the full scope of information required under Joint Convention reporting requirements is currently not feasible. However, the data portion of the National Report (excluding spent fuel) is covered 100% by the content of the NEWMDB data submissions. Therefore, the NEWMDB can serve as a platform for the production of National Reports and can help to provide data of a consistent content and quality for all Member States that choose to use it in this way.

Advantages of the NEWMDB

Several international organizations such as the IAEA, OECD-NEA, EC, just to mention a few, express a regular interest in national radioactive waste policies, infrastructure and inventories. Additionally, in many countries, regular reports on this topic are requested by various local bodies such as the governmental regulatory authorities, the parliament, etc. Although the basic information requested by these organizations is often the same, there are typically differences in the focus and also in the requested format. Sometimes only existing infrastructure and inventory numbers are needed, sometimes analysis of trends and predictions for the future must be provided.

As a result, national organizations responsible for reporting on radioactive waste are sometimes overwhelmed and frustrated at having to repeat the same job time and again, trying to reshape the same basic information into different and usually incompatible formats. An even worse situation can occur if the international organisations reach different local contacts and information sources. In such cases an incoherent, contradictory picture of the country's radioactive waste situation may arise due to a lack of consistency.

The IAEA's NEWMDB provides the flexibility to accommodate multiple radioactive waste reporting systems and also meets the Joint Convention reporting requirements for radioactive waste. Therefore, NEWMDB could serve as a basis for most international reporting requests, thus reducing unnecessary duplication of efforts, while at the same time founding the basis for consistency and coherence amongst all of the contributing Member States.

NEWMDB Reporting and the Joint Convention

Since the basis of Joint Convention reporting is a legally binding international agreement, the reporting itself must fulfil certain legal requirements. Although the technical details may be different from one country to another, the basic information requirements are the same. Since NEWMDB was originally designed to conform to the requirements of the Joint Convention, supplying data to it virtually ensures that a Member State has compiled and reported all of the necessary information and can use the reporting capabilities of the system to satisfy their obligations.

Therefore, the NEWMDB can provide a consistent basis for the development of these reports, and hardcopy outputs of the NEWMDB (as appendices to the reports) can provide the necessary detailed technical data to support the official statement. Also, one cannot underestimate the tremendous help the NEWMDB can provide to facilitate Joint Convention and other international reporting schemes. Using the NEWMDB in this way and will help to harmonize both the level of detail and the comparability of the data provided in National Reports.

Comparison of Data and Forecasting

Because of the comprehensive and global nature of the data collected by NEWMDB, it provides an ideal tool for national and international forecasting and benchmarking of radioactive waste management programmes. IAEA is constantly developing new tools within the system for data analysis and comparison amongst contributing Member States. Good data analysis can facilitate increases in efficiency, prediction of future resource needs, and even assist newly developing programmes to find the most cost-effective management strategies based on a review of existing programmes.

With the next version of NEWMDB, a specific feature will be added to produce tables of waste management data that directly comply with the format suggestions and content requirements of the Joint Convention.

Practical Considerations

Because the NEWMDB contains much of the data necessary for most Member States to prepare the waste management portions of a National Report, it could potentially reduce the work load of those responsible within each Member State for National Report preparation. It could also offer many other advantages, including:

1. Basic information describing facilities and programs is entered only one time and can be re-used as long as it is valid
2. By entering data into NEWMDB for tracking, data becomes immediately available for purposes of the Joint Convention, so there is only one “step” of data collection and entry
3. A template for the waste management portions of the National Report can be constructed one time and then simply updated using NEWMDB data
4. Waste management portions of the National Reports and data presented could become more consistent across most Member States
5. Similar information would become more accessible and comparable
6. Using the tool would partially fulfil the Joint Convention obligation to assist in the dissemination of information on radioactive waste management
7. Provides the additional possibility of generating reports to satisfy the requirements for other organizations (i.e., OECD-NEA, EC, internal reporting, etc.)

REFERENCES

[1] International Atomic Energy IAEA, “Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management”, Information Circular INFCIRC/456, 24 December 1997.

Country Waste Profile Report for
Argentina
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:44:02

Waste Class Matrix(ces) Used/Defined

Country: Argentina (Argentine Republic) Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #106: Waste classification in Argentina

A waste classification matrix is not legislated in Argentina. The IAEA default matrix will be used just for reporting to the NEWMDB. Moreover, the IAEA matrix was used to supply the information for the WMDB.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Mangement. First National Report - 2003 presents three categories for radioactive waste. The criteria to define and characterize radioactive waste in Argentina are related to the final disposal technological system proposed for each category.

Class B Waste (Low level Disposable Waste)
Class M (Intermediate Level) Disposable Waste
Class A (High Level and/or Long Lived) Disposable Waste

Attachment #1213: A table describing the radioactive waste classification presented in the First National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

File name: Classes.doc

File type: MS Office Document

Member State's Reference # 01

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Argentina (Argentine Republic) Reporting Year: 2005

Reporting Group: **RG1**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: This group will inform about the waste inventory located in the only authorized site to manage radwaste in Argentina.
The name of the place is Ezeiza Waste Management Area (AGE).

Site Name	Facility Name	Facilities Defined		
AGE	COMPACTOR	processing		
	DS		storage	
	IRWS		storage	
	M1		storage	
	TN		storage	
	CP			disposal
	LLLWT			disposal
	LLSWT			disposal

Reporting Group: **RG2**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: This group will inform about the radioactive waste stored in the two nuclear power plants in Argentina. CNA I and CNE.

Site Name	Facility Name	Facilities Defined		
CNA I	CEMENT	processing		
	COMPACTOR	processing		
	EVAPORATOR	processing		
	TR SYSTEM	processing		
	DRUMS		storage	
	FILTERS		storage	
	RESINS 1		storage	
	RESINS 2		storage	
CNE	COMPACTOR	processing		
	DRUMS		storage	
	FILTERS		storage	
	RESINS		storage	

Comment #9935: Reporting Group RG2

Nuclear Power plants are operated by Nucleoeléctrica Argentina S.A. (NASA).
The fuel used by both nuclear power plants is natural uranium and the coolant/moderator is heavy water.

Reporting Group RG1, Site Structure: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Full Name: EZEIZA WASTE MANAGEMENT AREA

License Holder(s) : PEDRO SOTO
e-mail: psoto@cae.cnea.gov.ar
Telephone: (54-11) 6779-8417
Fax: (54-11) 6779-8535

The following list the waste management facilities that are located at this site.

Facility: COMPACTOR

Description	This plant is used to compact low-level solid waste in 200 liter drums. A 16-ton hydraulic press is used to reduce the waste volume by a factor of 5.

Processing part of the "COMPACTOR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1973, Estimate

Facility: DS

Description	200 liters waste packages from nuclear power plants that couldn´t be disposed of in the LLSWT system have been stored in marine containers.

Storage part of the "DS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	513 drums have been stored in marine containers.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DS	mound	1998	Yes	No	No	No

Facility: IRWS

Description	Infected Radioactive Waste Storage. It is a new facility licensed during 2004 to store 50-liter drums.

Storage part of the "IRWS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	The capacity of the storage is about 200 m3.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
IRWS	building	2004	No	No	No	No

Facility: M1

Description	This facility is used for storing Intermediate-level waste, long-lived low-level waste, and also spent/disused radiation sources that according to the operation license can not be disposed of in the disposal facilities.

Storage part of the "M1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	Yes				
Capacity	The facility was licensed in 1999. It is 60m long, 20m wide and 10m high. The building includes a traveling crane with 3 ton main hook and 2 ton secondary hook and a controlled ventilation system.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
M1	building	2000	No	No	No	Yes

Reporting Group RG1, Site Structure: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Facility: TN

Description	The Reception and Handling Yard was conceived for reception, control and administration of wastes received or produced in its own area. The semi-covered yard comprises an 800m2 reinforced concrete platform fenced on two sides by brick walls.

Storage part of the "TN" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	Yes
Capacity	The yard use was authorized in 1994. At this time, it is also being used as a temporary storage.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TN	concrete pad	1989	No	No	No	Yes

Facility: CP

Description	Concrete Pits. This facility is considered an alternative for the management of low-impact solid waste that according to its activity or geometry can not be disposed of in the existing trenches. Historic wastes have been disposed of in them.

Disposal part of the "CP" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	borehole		
Facility is modular			
Capacity - existing (m3)	240	Capacity -planned (m3)	240
Depth (m)	10		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design	Yes	1968	1970
construction	Yes	1968	1971
commissioning	Yes	1968	1972
operation		1969	2001

Comment #7253: CP Comments

The system comprises two underground pits (4m diameter and 10m deep) with 30cm thick reinforced concrete side walls and bottom. Wastes disposed of in this system are usually metal parts from contaminated areas. Periodically, concrete is poured inside the pits in order to immobilize the contaminated materials and reduce the dose rate at the top.

The first pit was commissioned in 1972 and was operated untill 1995, while the second was in operation from 1999 to 2001, when the safety re-assessment of the complete AGE was commenced. The first pit operated without an Operating License and therefore the wastes in it are considered historic.

In addition, there are another two previous and smaller pits with historic wastes.

Reporting Group RG1, Site Structure: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Facility: LLLWT

Description	There are three semi-containment trenches for low-activity liquid wastes. This facility has been designed for very low-level liquid waste that were not able to be directly discharged as effluents.

Disposal part of the "LLLWT" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	1200	Capacity -planned (m3)	1200
Depth (m)	3		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design	Yes	1968	1970
construction	Yes	1968	1971
commissioning	Yes	1971	1971
operation		1971	2001

Comment #7251: LLLWT Comments

The system comprises three ionic exchange beds formed by selected soil mixtures with a larger proportion of calcareous silts and sand added to improve the process efficiency. These soils allow radionuclides with very short half-life periods to decay to non significant levels during their stay in the bed mass. The operating capacity for each one of these systems is approximately 2 m3/day. A network of phreatometers allows periodical groundwater control. The systems were commissioned in 1971. Two units ended operations in 1986, while the third unit was functioning until the year 2001 when the safety re-assessment of the complete AGE was commenced. In view of the fact that the Operating license of these systems was not granted by ARN until 1995, all liquid wastes disposed of before 1995 are considered historic.

Reporting Group RG1, Site Structure: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Facility: LLSWT

Description	Trench Nº1 (700m3) was closed in 1988 with some historic waste in it.Trench Nº2 (1120m3) started operation in 1989. It has been licensed to dispose of 200 liter drums with compacted solid waste, cemented liquid waste, and conditioned SRS.

Disposal part of the "LLSWT" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	1820	Capacity -planned (m3)	1820
Depth (m)	1.2		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design		1974	1988
construction		1974	1988
commissioning		1974	1988
operation		1975	
Additional Activities and Events			
EVENT: operation suspended		2001	

Comment #7183: LLSWT Comments

The first trench was built in natural soil without any type of engineered improvement.

The second trench was commissioned in 1989 and only one third of the total capacity is covered. This second trench was operated without license until 1995, and for that reason all the wastes disposed until that date are considered historic.

This second trench was built in a selected calcareous-silty soil compacted to 98% of its maximum theoretical value, supporting a leveled broken stone bed with slopes toward both sides and 30cm thick concrete perimeter retaining walls. The rain water drainage system prevents water accumulation around drum bases. Coverage of the first trench’s last section as well as the second trench’s first third were made using the same engineering concept. The operation of trench Nº 2 has been formally suspended since 2001 after three years without having located drums in it. Currently, a facility safety re-assessment is being performed.

Reporting Group RG1, Site Data: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Full Name: EZEIZA WASTE MANAGEMENT AREA

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	102	13	27	0	60	0	0	0	Yes
LILW-SL	Storage	Yes	202.8	61	22	0	17	0	0	0	Yes
LILW-SL	Disposal	Yes	2754.7	64	1	0	35	0	0	0	Yes
LILW-LL	Storage	No	4.3	0	28	0	72	0	0	0	Yes
LILW-LL	Storage	Yes	23	0	43	0	57	0	0	0	Yes
LILW-LL	Disposal	Yes	169.6	2	46	13	39	0	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Radionuclide Separation			same	
Solvent Extraction	Yes			

Comment #7371: Radionuclide Separation

During last year an ion exchange process was implemented in the Mo 99 production plant to separate cesium from the intermediate level waste stream. The cesium will be eluted from the column to produce cesium source for braquitherapy.

Comment #7372: Solvent extraction

A solvent extraction process was developed to decontaminate lubricant oils used in fuel elements fabrication. This process will be implemented in rutinary operation in the near future.

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation	Yes			Yes
Containerization			same	
Encapsulation			decrease	

Comment #7373: Encapsulation

During 2001 to 2003 radium medical sources were encapsulated for long term storage.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cf-252	1			No	Yes	4	3.53E+00	2005.12
	3.53E+00							
Cf-252	2			No	Yes	5	7.10E-07	2005.12 (estimate)
	7.10E-07							
Co-60		4		No	Yes	3	4.15E+02	2005.12
		4.15E+02						
Sr-90		3		No	Yes	4	3.04E+02	2005.12 (estimate)
		3.04E+02						
Sr-90	91	3		No	Yes	5	7.01E+01	2005.12 (estimate)
	4.75E+01	2.26E+01						

Reporting Group RG1, Site Data: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Sr-90		1		No	Yes	3	1.40E+03	2005.12 (estimate)
		1.40E+03						
Po-210	39			No	Yes	5	3.23E-05	2005.12 (estimate)
	3.23E-05							
Co-60		3	4	No	Yes	1	7.17E+05	2005.12 (estimate)
		1.06E+05	6.11E+05					
Cs-137		6		No	Yes	2	1.42E+05	2005.12 (estimate)
		1.42E+05						
Cs-137		7		No	Yes	3	1.25E+03	2005.12 (estimate)
		1.25E+03						
Cs-137		2		Yes	No	3	8.71E+02	2005.12 (estimate)
		8.71E+02						
Co-60		46		No	Yes	2	3.19E+05	2005.12 (estimate)
		3.19E+05						
Pm-147	18			No	Yes	5	6.07E+00	2005.12 (estimate)
	6.07E+00							
Pm-147	4			Yes	No	5	1.68E+00	2005.12 (estimate)
	1.68E+00							
Kr-85	17	23		No	Yes	5	3.50E+02	2005.12 (estimate)
	3.31E+01	3.17E+02						
Ir-192	51			No	Yes	5	6.97E-01	2005.12 (estimate)
	6.97E-01							
H-3	18	2		No	Yes	5	2.20E+04	2005.12 (estimate)
	3.05E+01	2.20E+04						
Fe-55	14			No	Yes	5	5.06E+00	2005.12 (estimate)
	5.06E+00							
Cs-137	87	121		No	Yes	4	3.70E+03	2005.12 (estimate)
	3.32E+02	3.37E+03						
Cs-137	148			No	Yes	5	4.31E+01	2005.12 (estimate)
	4.31E+01							
Cs-137	64	45		Yes	No	4	1.25E+03	2005.12 (estimate)
	1.25E+02	1.12E+03						
Cs-137	40			Yes	No	5	1.22E+01	2005.12 (estimate)
	1.22E+01							
Co-60	17	4		No	Yes	4	8.44E+01	2005.12 (estimate)
	1.78E+01	6.66E+01						
Co-60	166			No	Yes	5	7.13E+00	2005.12 (estimate)
	7.13E+00							
Co-60	43			Yes	No	5	3.33E-01	2005.12 (estimate)
	3.33E-01							
Cf-252	1			Yes	No	5	2.70E-02	2005.12 (estimate)
	2.70E-02							
Cd-109	4			No	Yes	5	9.50E-03	2005.12 (estimate)
	9.50E-03							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					

Reporting Group RG1, Site Data: AGE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Ra-226	35		No	Yes	5	2.20E+00	2005.12 (estimate)
	2.20E+00						
Ra-226	97		No	Yes	4	5.45E+01	2005.12 (estimate)
	5.45E+01						
Ra-226	84		Yes	No	5	8.18E+00	2005.12 (estimate)
	8.18E+00						
Ra-226	731		Yes	No	4	2.33E+02	2005.12 (estimate)
	2.33E+02						
Pu-238		20	No	Yes	3	1.46E+03	2005.12 (estimate)
		1.46E+03					
Pu-238	1		No	Yes	4	8.76E-01	2005.12 (estimate)
	8.76E-01						
Ni-63	44		No	Yes	5	2.07E+01	2005.12 (estimate)
	2.07E+01						
Am-241	1485		No	Yes	5	1.72E+00	2005.12 (estimate)
	1.72E+00						
Am-241	46	50	No	Yes	4	6.53E+02	2005.12 (estimate)
	6.82E+01	5.85E+02					
Am-241		16	No	Yes	3	2.51E+03	2005.12 (estimate)
		2.51E+03					
Am-241		2	No	Yes	2	2.46E+03	2005.12 (estimate)
		2.46E+03					
Am-241	22		Yes	No	5	3.89E-01	2005.12 (estimate)
	3.89E-01						
Am-241		7	Yes	No	4	1.30E+02	2005.12 (estimate)
		1.30E+02					
Am-241		3	Yes	No	3	9.38E+02	2005.12 (estimate)
		9.38E+02					

Reporting Group RG2, Site Structure: CNA I

Country: Argentina (Argentine Republic) Reporting Year: 2005

Full Name:	CENTRAL NUCLEAR ATUCHA I ATUCHA I NUCLEAR POWER PLANT
License Holder(s) :	MANUEL GUALA Until September 2005 OSVALDO PENNACCHIETTI Since October 2005

Comment #9926: CNA I Nuclear Power Plant

Atucha I Nuclear power plant (PHWR type) has an installed power capacity of 357 MW(e).

The following list the waste management facilities that are located at this site.

Facility: CEMENT

Description	The purpose of this facility is to immobilize by cementation the evaporator concentrate, the tank cleaning sludge, liquid wastes from decontamination, and non-compactable and structural solid wastes.

Processing part of the "CEMENT" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1992, Estimate

Comment #9937: Processing Facility CEMENT

The facility is designed only for low-level wastes. It includes storage and feeding tanks, having a homogenization and sampling system of liquid and sludge waste to be cemented. The immobilization system comprises a reusable blade vertical mixer that allows liquid waste in-drum cementation.

Facility: COMPACTOR

Description	The Compaction System comprises a 16 t hydraulic press, installed in a bay located in the controlled zone inside the reactor building. Compactable solid wastes are collected in plastic bags and compacted in 200 liter drums.

Processing part of the "COMPACTOR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1974

Facility: EVAPORATOR

Description	A Decanting/Separator System is used to separate residual waters from solids suspended in the liquid. The system makes the necessary controls to convey the residual waters to the discharge system or to the concentration by evaporation system.

Processing part of the "EVAPORATOR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1974

Comment #9936: Processing Facility EVAPORATOR

Purified water is collected in control tanks where its activity concentration is checked. If the value is lower than the limits set forth in the Operating license, the liquids are eliminated as controlled and scheduled radioactive discharges into the Paraná de las Palmas River. If the value is higher than the permitted limit, the water is returned to the collecting tanks for evaporation treatment.

Facility: TR SYSTEM

Description	The function of the System (TR) is to collect all residual waters produced in the controlled area. The system includes four 10 m3 tanks located in the reactor building.

Processing part of the "TR SYSTEM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1974

Reporting Group RG2, Site Structure: CNA I

Country: Argentina (Argentine Republic) Reporting Year: 2005

Facility: DRUMS

Description	This facility located inside Atucha I nuclear power plant is used to store 200 liters drums with treated and conditioned solid and liquid low level radioactive waste.

Storage part of the "DRUMS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DRUMS	building	0	No	No	No	No

Comment #9932: Storage Facility DRUMS

The following waste types are stored in this facility:

Concentrates and sludge from the cleanup of tanks are immobilized in cement matrices and conditioned in 200-liter drums.

The treatment of compactable solid radioactive waste generated in the operation and maintenance activities, consists of reducing the waste volume by compressing it into 200-liter drums.

Non-compactable solid waste that are immobilized in cement matrixes and conditioned in 200-liter drums.

Facility: FILTERS

Description	It is an underground storage used to store spent mechanical filters from the primary circuit of the reactor.

Storage part of the "FILTERS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	There are 8 pits of 3 m3 each one.				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
FILTERS	pit	1974	No	No	Yes	No

Facility: RESINS 1

Description	Spent ion exchange resin beds from the primary system of water cooling purification are stored in tanks inside Atucha I nuclear power plant

Storage part of the "RESINS 1" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	There are four tanks, two of 15 m3 and two of 9 m3.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
RESINS 1	tank (stainless steel)	1974	No	No	Yes	No

Facility: RESINS 2

Description	This facility has been used to free the tanks with spent ion exhange resin beds.

Storage part of the "RESINS 2" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	This facility has a capacity of 46 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
RESINS 2	well	1974	No	No	No	No

Reporting Group RG2, Site Structure: CNE

Country: Argentina (Argentine Republic) Reporting Year: 2005

Full Name: CENTRAL NUCLEAR EMBALSE
EMBALSE NUCLEAR POWER PLANT

License Holder(s) : RICARDO TIBALDI

Comment #9931: CNE Nuclear Power Plant

Embalse Nuclear Power Plant (Candu type reactor) has an installed power capacity of 648 MW(e).

The following list the waste management facilities that are located at this site.

Facility: COMPACTOR

Description	There is an area in the reactor building controlled zone housing with a 16-ton capacity hydraulic press.

Processing part of the "COMPACTOR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1984

Facility: DRUMS

Description	This facility located inside Embalse nuclear power plant is used to store 200 liters drums.

Storage part of the "DRUMS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DRUMS	building	1995	No	No	No	No

Comment #9933: Storage Facility DRUMS

Treatment and conditioning practices, such as compacting of solid compactable wastes and immobilization in cement matrixes of non-compactable solids are performed at Embalse Nuclear Power Plant.

Facility: FILTERS

Description	Storage for the spent filters generated in the nuclear power plant along the whole life cycle.

Storage part of the "FILTERS" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	The storage facility for purification filters is located in an approximately 50 m x 50 m elevated area located some 250 meters from the service building.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
FILTERS	building	1984	No	No	No	No

Comment #9938: Storage Facility FILTERS

Underground containment structures include concrete cubicles and cylindrical pits with steel lined concrete walls. The drainage characteristics of the elevated facility are such that the level of the lowest points of the storage cubicles are above the estimated highest level of the groundwater table.

Concrete storage cubicles are divided into separate cells where low-level wastes are stored. Cylindrical vertical cavities (i.e., boreholes) are used to store intermediate-level waste purification mechanical filters.

The original design comprises a concrete cubicle made of five aligned cells with a depth of 3 m and a cross section of 3 m x 3 m, and five concrete cylindrical pits with a diameter of 1 m and a depth of 4.4 m. The capacity is adequate to contain all solid radioactive wastes produced during the power plant useful life. Nevertheless, the facility allows expansion of the concrete containment structures to store all solid radioactive wastes that could be additionally generated.

Facility: RESINS

Description	Spent ion exchange resin beds are stored in tanks.

Storage part of the "RESINS" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	There are two tanks of 260 m3 each one.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
RESINS	tank (concrete)	1984	No	No	Yes	No

Comment #9934: Storage Facility RESINS

At CNE, liquid radioactive waste originating in the operation and maintenance activities are treated by ion exchange resin beds, with subsequent discharge into the environment of the treated effluent.

REGULATORS

Country: Argentina (Argentine Republic) Reporting Year: 2005

Name	ARN
Full Name	Autoridad Regulatoria Nuclear. (Nuclear Regulatory Authority).
Division	
City or Town	Buenos Aires

REGULATIONS / LAWS

Country: Argentina (Argentine Republic) Reporting Year: 2005

Name	LNAN	
Title or Name	LEY NACIONAL DE ACTIVIDAD NUCLEAR (National Law of Nuclear Activiy)	
Reference Number	24804	
Date Promulgated or Proclaimed	1997-04-23	Law

Comment #301: National Law of Nuclear Activity

Act Nª 24804 establishes that the Nuclear Regulatory Authorithy (ARN) is in charge of nuclear regulations and control concerning radiological and nuclear safety, safeguards and physical protection, giving in addition, advice to the Executive Power on subjects of its competence. It appoints the National Comission of Atomic Energy - independent from the Regulatory Body - as the responsible organization for radioactive waste management in the country.

Attachment #1125: This document contains the text of the National Law of Nuclear Activity (Spanish version) for Argentina.

File name: LNAN.doc

File type: MS Office Document

Member State's Reference # LNAN

Name	RGRR	
Title or Name	REGIMEN DE GESTION DE RESIDUOS RADIACTIVOS (Radioactive Waste Management Regimen).	
Reference Number	25018	
Date Promulgated or Proclaimed	1998-10-19	Law

Comment #302: National Law of Radioactive Waste Management

Act Nº 25018 creates the National Radioactive Waste Management Programme, belonging to the Atomic Energy Commission. This programme deals with the treatment, conditioning, storage, transport and disposal of low, medium and high level radioactive waste, as well as the development and implementation of all mechanisms required to attain their objectives.

Attachment #1126: This document contains the text of the National Law of Radioactive Waste Management Regimen for Argentina (Spanish Version) .

File name: RGRR.doc

File type: MS Office Document

Member State's Reference # RGRR

Name	AR 10.12.1	
Title or Name	Gestion de Residuos Radiactivos. (Radioactive Waste Management)	
Reference Number	ARN 29/99	
Date Promulgated or Proclaimed	1999-12-01	Regulation

Attachment #1124: The objective of this document is to establish general requirements for the management of radioactive wastes, taking into account the protection of human health and the environment for both present and future generations.

File name: 10-12-1R0.pdf

File type: PDF Document

Member State's Reference # 10-12-1R0

Policies

Country: Argentina (Argentine Republic) | Reporting Year: 2005

National Systems

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

Attachment #1127: The framework of the Radioactive Waste Management National Program was established by the Atomic Energy Commission on 2003-02-27, according to the National Law # 25018.
The spanish version of the resolution can be seen in the attachment.

File name: Estructura Orgánica del PROGRAMA NACIONAL DE GESTION DE.doc

File type: MS Office Document

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

Comment #7269: Strategic Plan

According to the specific Law 25018, National Atomic Energy Commission developed a Radioactive Waste Management Strategic Plan, which was submitted to the approval of the National Congress.
The Plan recommends the course of action for the safe management of low, intermediate and high level radioactive wastes produced in the performance of practices and those generated from uranium millings, decontamination and decommissioning of nuclear and radioactive facilities. The Plan also evaluates the necessary funds to fulfill with the programmed actions.

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	No

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete

Policies

Country: Argentina (Argentine Republic) **National Systems** Reporting Year: 2005

16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

Comment #7270: Responsabilities

The responsabilities of waste generators and operators of waste management facilities have been stablished by the Nuclear Regulatory Authority on AR.10.12.1. regulation.

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes

117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - Some
41	Environmental Impact Statement (EIS)	Yes - Some
42	Performance Assessment (PA)	Yes - Some
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes

If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.

52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	No
54	leachate treatment systems	No
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

Policies

Country: Argentina (Argentine Republic) **Processing/Storage** Reporting Year: 2005

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

Comment #308: Radioactive waste import

National Constitution or Fundamental Law forbids to import radioactive wastes.
National Law of dangerous wastes prohibits to import radioactive wastes and remits to the specific legislation

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)

Policies

Country: Argentina (Argentine Republic) **Decommissioning** Reporting Year: 2005

98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Comment #7258: Decommission Comments

Only major facilities require a timeframe for decommissioning. Considering major facilities those that manage important inventory of radioactive material.

Country Waste Profile Report for

Belgium

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:45:05

Waste Class Matrix(ces) Used/Defined

Country: Belgium, Kingdom of

Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: NIRAS

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Category A	100	0	0
Category B	0	100	0
Category C	0	85.9	14.1
Category R	100	0	0

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

Attachment #1129: This document outlines the link between the classification scheme of conditioned radioactive waste, as developed by ONDRAF/NIRAS, and the Agency's proposed scheme.

File name: IAEA NEWMDB WASTEMATRIX 17OCT05.doc

File type: MS Office Document

Member State's Reference # 2001-3597 (revision 1)

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Belgium, Kingdom of

Reporting Year: 2005

Reporting Group: **FOREIGN**

Inventory Reporting Date: December 2005

Waste Matrix Used: NIRAS

Description: Belgian radioactive waste stored outside Belgium.

Site Name	Facility Name	Facilities Defined		
ForeignRP	AREVA	processing		
	UKAEA	processing		

Reporting Group: **NIRAS**

Inventory Reporting Date: December 2005

Waste Matrix Used: NIRAS

Description: The Belgian National Agency for Radioactive Waste Management and Enriched Fissile Materials, NIRAS, manages all radioactive category A, B and C waste in Belgium and has an industrial branch, namely Belgoprocess, with 2 sites in Dessel, Belgium.

Umicore is an industrial company which produced category R-waste.

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

Groups Overview

Country: Belgium, Kingdom of

Reporting Year: 2005

Reporting Group: **SEA_DUMP**

Inventory Reporting Date: December 2005

Waste Matrix Used: NIRAS

Description: This group reflects the inventory of Belgian radioactive waste disposals at sea, carried out during the period 1960-1982.

Site Name	Facility Name	Facilities Defined		
SEA_DUMP	SEA_DUMP			disposal

Reporting Group FOREIGN, Site Structure: ForeignRP

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Foreign Reprocessing and Waste Treatment Plants

License Holder(s) :

The following list the waste management facilities that are located at this site.

Facility: AREVA

Description	AREVA Group, (formerly Cogema), Cap de la Hague, France

Processing part of the "AREVA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	Yes	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	, Unknown

Facility: UKAEA

Description	UKAEA, Dounreay, United Kingdom

Processing part of the "UKAEA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	, Unknown

Reporting Group FOREIGN, Site Data: ForeignRP

Country: Belgium, Kingdom of — Reporting Year: 2005

Full Name: Foreign Reprocessing and Waste Treatment Plants

Inventory Reporting Date: December 2005 — Waste Matrix: NIRAS

Waste Inventory

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Category A	Storage UKAEA	No	9.197	0	0	100	0	0	0	0	No
Category B	Storage UKAEA	No	18.358	0	0	100	0	0	0	0	No
Category C	Storage AREVA	Yes	40.32	0	0	100	0	0	0	0	No

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			same	
Vitrification			decrease	

Reporting Group NIRAS, Site Structure: BP1

Country: Belgium, Kingdom of | Reporting Year: 2005

Full Name:	Belgoprocess, site 1
License Holder(s) :	Belgoprocess N.V. Gravenstraat 73 B-2480 Dessel Belgium

The following list the waste management facilities that are located at this site.

Facility: CILVA

Description	CILVA is Belgium's central facility for treatment and conditioning of solid and liquid LILW-SL.

Processing part of the "CILVA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1994

Facility: EUROBIT

Description	Eurobitumen is a facility for the treatment and conditioning of liquid, alpha bearing LILW-LL (i.e. sludge and evaporator concentrates) into bitumen.

Processing part of the "EUROBIT" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1978

Facility: PAMELA

Description	PAMELA is a former pilot plant for vitrification of high-level liquid waste until 1991, generated by the Eurochimic reprocessing plant. During the 1990's, it was heavily modified and is currently used for the conditioning of solid ILW-LL

Processing part of the "PAMELA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1981

Facility: B110X

Description	B110X is a new facility for the treatment and conditioning of solid (mostly alpha bearing) LLW-LL.

Processing part of the "B110X" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2003

Storage part of the "B110X" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	Yes	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
B110X	building	0	No	No	No	Yes

Comment #9915: Storage Facility B110X

SRS:38 alpha sources are stored in this building.

Facility: B103

Description	Building 103 is a storage facility for alpha contaminated unprocessed waste.

Storage part of the "B103" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
B103	building	0	No	No	No	No

Facility: B104

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

Storage part of the "B104" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
B104	building	0	No	No	No	No

Facility: B127

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

Storage part of the "B127" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	Yes	Category B	Yes	Yes
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Total capacity is evaluated at 18.393 packages, the equivalent of some 4.650 m³ of conditioned waste.

Types of Storage Units

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

Facility: B129

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

Storage part of the "B129" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	Yes	Yes	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Total capacity is evaluated at 2.572 packages, the equivalent of some 250 m³ of vitrified waste.

Types of Storage Units

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

Reporting Group NIRAS, Site Structure: BP1

Country: Belgium, Kingdom of | Reporting Year: 2005

Facility: B136

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

Storage part of the "B136" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	Yes	Yes	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Present total capacity is evaluated at 590 packages of vitrified waste (bunker 170: some 90 m³). Other capacities: see comments.

Types of Storage Units

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

Facility: B150

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

Storage part of the "B150" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Total capacity is evaluated at 3.424 packages, the equivalent of some 2.000 m³ of conditioned waste.

Types of Storage Units

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

Facility: B151

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

Storage part of the "B151" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	Yes	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Total capacity is evaluated at 35.422 packages, the equivalent of some 14.300 m³ of conditioned waste.

Types of Storage Units

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

Facility: B153

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

Storage part of the "B153" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
B153	building	0	No	No	No	No

Facility: B155

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

Storage part of the "B155" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	Yes	Yes
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Bunker LAGAL (plutonium contaminated waste): 2.000 m³ (i.e. 5.000 packages) Bunker RAGAL (radium contaminated waste): 2.000 m³ (i.e. 5.000 packages)

Types of Storage Units

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

Facility: B156

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

Storage part of the "B156" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	Yes	Yes	Category R	No	No
SRS	No	No			
List SRS?	No				

Capacity	Total capacity of buidling 156 consists of 8 CASTOR containers.

Types of Storage Units

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

Reporting Group NIRAS, Site Data: BP1

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Belgoprocess, site 1

Inventory Reporting Date: December 2005 Waste Matrix: NIRAS

Waste Inventory

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Category A	Storage B150	Yes	1913	76	0	0	6	0	18	0	No
Category A	Storage B151	Yes	11038	32	0	0	52	0	16	0	No
Comment #9902: Waste Storage facilities/Class Category A/Site BP1 The noticeable decrease in the amount of unprocessed waste (reporting year 2003: 3.297 m³; reporting year 2004: 0 m³) is due to the fact that waste in "interim storage" has been omitted from the current submission.											
Category B	Storage B103	No	388	0	80	0	6	0	14	0	No
Category B	Storage B104	No	112	0	49	0	0	0	51	0	No
Category B	Storage B110X	No	317	0	37	0	10	0	53	0	No
Category B	Storage B153	No	78	0	0	0	5	0	95	0	No
Category B	Storage B127	Yes	3966	21	0	76	3	0	0	0	No
Category B	Storage B155	Yes	109	0	100	0	0	0	0	0	No
Category C	Storage B129	Yes	215	0	0	91	0	0	9	0	No
Category C	Storage B136	Yes	38	0	0	100	0	0	0	0	No
Comment #9899: Waste Storage facilities/Class Category C/Site BP1 Building 156: 7 CASTOR containers are stored in this building. Each CASTOR contains 30 irradiated fuel assemblies, unloaded from the Belgian Reactor 3 (BR3), Belgium's first PWR which was shut down in 1987. Decommissioning of BR3 is nearing completion.											

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Reporting Group NIRAS, Site Structure: BP2

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Belgoprocess, site 2

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

The following list the waste management facilities that are located at this site.

Facility: B280X

Description	B280X is a new treatment- and conditioning facility for solid, radium contaminated LILW.

Processing part of the "B280X" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2003

Facility: KWB/BRE

Description	KWB/BRE is a treatment- and conditioning facility for liquid LLW-SL. This waste is conditioned into a bitumen matrix.

Processing part of the "KWB/BRE" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1980

Reporting Group NIRAS, Site Structure: BP2

Country: Belgium, Kingdom of Reporting Year: 2005

Facility: MUMMIE

Description	MUMMIE is a treatment- and conditioning facility for liquid LLW-SL and liquid LLW-LL. This waste is conditioned into a bitumen matrix.

Processing part of the "MUMMIE" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1969

Facility: PYROLYSIS

Description	The pyrolysis installation decomposes alpha contaminated organic liquids, originally generated by the former Eurochemic reprocessing plant and cements the remaining solid waste.

Processing part of the "PYROLYSIS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1999

Facility: B270M

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

Storage part of the "B270M" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	No	Category B	Yes	No
Category C	No	No	Category R	No	No
SRS	Yes	No			
List SRS?	No				
Capacity	Total capacity is evaluated at 4.899 packages.				

Types of Storage Units

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

Comment #9914: Storage Facility B270M

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

Reporting Group NIRAS, Site Data: BP2

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Belgoprocess, site 2

Inventory Reporting Date: December 2005 Waste Matrix: NIRAS

Waste Inventory

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Category A	Storage B270M	No	3	0	0	0	67	0	33	0	Yes
Comment #9904: Waste Storage facilities/Class Category A/Site BP2 The decrease in the amount of unprocessed waste (reporting year 2003: 3.825 m³; reporting year 2004: 3 m³) is due to the fact that waste in "interim storage" has been omitted from the current submission.											
Category B	Storage B270M	No	399	0	0	0	3	0	97	0	Yes
Category B	Storage B270M	Yes	544	1	0	0	11	2	36	50	Yes
Comment #9903: Waste Storage facilities/Class Category B/Site BP2 The increase in the amount of unprocessed waste (reporting year 2003: 311 m³; reporting year 2004: 676 m³) is due to the fact that a fraction of this waste has been reclassified from category A to category B.											

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Size Reduction			increase	
Wastewater Treatment			same	

Processing - Conditioning method(s)

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

Reporting Group NIRAS, Site Structure: UMICORE

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Umicore N.V.

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

The following list the waste management facilities that are located at this site.

Facility: OPL

Description	OPL stands for the Dutch word "OPsLagplaats", which simply means storage facility. At present, it is considered by Umicore as a DISPOSAL facility, but the necessary licences are not yet acquired.

Storage part of the "OPL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	No	No	Category B	No	No
Category C	No	No	Category R	Yes	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
OPL	bunker	1984	Yes	Yes	No	No

Reporting Group NIRAS, Site Data: UMICORE

Country: Belgium, Kingdom of Reporting Year: 2005

Full Name: Umicore N.V.

Inventory Reporting Date: December 2005 Waste Matrix: NIRAS

Waste Inventory

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Category R	Storage	No	45000	0	0	0	100	0	0	0	Yes

Reporting Group SEA_DUMP, Site Structure: SEA_DUMP

Country: Belgium, Kingdom of Reporting Year: 2005

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

License Holder(s) : not applicable

The following list the waste management facilities that are located at this site.

Facility: SEA_DUMP

Description	Disposal sites of Belgian radioactive waste in the North Atlantic Ocean.

Disposal part of the "SEA_DUMP" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Category A	Yes	No	Category B	No	No
Category C	No	No	Category R	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No

Type	sea dumping (deep sea disposal)

Depth (m)	65-5200	
Host medium	unknown (site not selected)	

Phase	Estimate	Start Year	End Year
operation	Yes	1960	1982

Reporting Group SEA_DUMP, Site Data: SEA_DUMP

Country: Belgium, Kingdom of Reporting Year: 2005

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

Inventory Reporting Date: December 2005 Waste Matrix: NIRAS

Waste Inventory

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Category A	Disposal	Yes	15765	50	0	0	50	0	0	0	No

REGULATORS

Country: Belgium, Kingdom of

Reporting Year: 2005

Name	Interior
Full Name	Ministry of the Interior
Division	Ministry of the Interior
City or Town	Brussels

Name	State
Full Name	State Secretary for Energy and Sustainable Development
Division	State Secretary for Energy and Sustainable Development
City or Town	Brussels

REGULATIONS / LAWS

Country: Belgium, Kingdom of Reporting Year: 2005

Name	08081980	
Title or Name	Law of 8th August, 1980, outlining the organisation, funding and core business of ONDRAF/NIRAS.	
Reference Number	08081980	
Date Promulgated or Proclaimed	1980-08-08	Law

Name	11011991	
Title or Name	Law of 11th January, 1991, replacing the Law of 8th August 1980, outlining the organisation, funding and core business of ONDRAF/NIRAS.	
Reference Number	11011991	
Date Promulgated or Proclaimed	1991-01-11	Law

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

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

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

REGULATIONS / LAWS

Country: Belgium, Kingdom of Reporting Year: 2005

Name	15042003	
Title or Name	Law regarding the build up of financial provisions for the decommissioning of nuclear power plants and the management of nuclear fuel, irradiated in these nuclear power plants.	
Reference Number	15042003	
Date Promulgated or Proclaimed	2003-04-15	Law

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

MILESTONES

Country: Belgium, Kingdom of | Reporting Year: 2005

Start Year or Reference Year:	1922	End Year	1986
Description of Milestone			
Umicore opens a refinery in Sint-Jozef-Olen, Belgium. For years, the factory is the world's largest producer of radium.			

Start Year or Reference Year:	1952	End Year	
Description of Milestone			
The Research Centre for Nuclear Energy Application is founded, later renamed the Nuclear Research Centre. The Nuclear Research Centre's site in Mol houses two research reactors and has a staff of 700.			

Start Year or Reference Year:	1959	End Year	1978
Description of Milestone			
Eurochemic's experimental spent nuclear fuel reprocessing plant is commissioned in Dessel, Belgium.			

Start Year or Reference Year:	1963	End Year	1987
Description of Milestone			
The PWR BR3 (Belgian Research 3) commences operations. It is operated by the Nuclear Research Centre on its Mol-site. The BR3 is the first operational PWR in Western Europe. The operational era of the BR3 ends in 1987. It is the first PWR that is to be decommissioned in Western Europe.			

Start Year or Reference Year:	1966	End Year	
Description of Milestone			
The Belgian government gives the go-ahead for the construction of the first commercial nuclear power plants at Doel and Tihange.			

Start Year or Reference Year:	1975	End Year	
Description of Milestone			
The PWR's Doel 1 (392,5 MW), Doel 2 (392,5 MW) and Tihange 1 (870 MW) commence operations.			

Start Year or Reference Year:	1975	End Year	
Description of Milestone			
The first commercial nuclear power plants are commissioned in Doel and Tihange. There are now seven reactors in operation, all of the PWR-type.			

Start Year or Reference Year:	1978	End Year	
Description of Milestone			
Since 1978 great progress has been made in research on deep disposal of radioactive waste, thanks to the HADES underground laboratory at Mol.			

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
ONDRAF/NIRAS, the Belgian National Agency for Radioactive Waste Management and Enriched Fissile Materials, is established by law in 1980.			

Start Year or Reference Year:	1982	End Year	
Description of Milestone			
The PWR Doel 3 (900 MW) commences operations.			

Start Year or Reference Year:	1983	End Year	
Description of Milestone			
The PWR Tihange 2 (900 MW) commences operations.			

MILESTONES

Country: Belgium, Kingdom of Reporting Year: 2005

Start Year or Reference Year:	1985	End Year	
Description of Milestone			
The PWR's Doel 4 (980 MW) and Tihange 3 (980 MW) commence operations. They represent the final units of the Belgian fleet of nuclear power plants.			

Start Year or Reference Year:	1986	End Year	
Description of Milestone			
Building 150, the first Belgian purpose-designed storage facility for category A-waste, is put into operation on the Belgoprocess-site.			

Start Year or Reference Year:	1986	End Year	
Description of Milestone			
Since 1986, ONDRAF/NIRAS has used its subsidiary Belgoprocess N.V. in Mol-Dessel for processing and interim storage of radioactive waste and decommissioning of nuclear facilities.			

Start Year or Reference Year:	1994	End Year	
Description of Milestone			
CILVA, a solid and liquid low level waste processing plant, is commissioned on the Belgoprocess site.			

Start Year or Reference Year:	2000	End Year	
Description of Milestone			
The first transport of vitrified waste, arising from the abroad reprocessing of Belgian spent fuel, arrives at the Belgoprocess site in Mol-Dessel and is stored in building 136, a purpose-designed facility for the storage of category B- and category C-waste.			

Start Year or Reference Year:	2001	End Year	
Description of Milestone			
EIG EURIDICE is the joint venture set up by ONDRAF/NIRAS and the Nuclear Research Centre to implement the PRACLAY programme. PRACLAY is a demonstration programme designed to prove the technical feasability of disposing of category B- and category C-waste in deep clay layers.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
Building 156, a purpose-designed facility for the dry storage of irradiated fuel elements used by the PWR BR3, is put into operation on the Belgoprocess-site in Dessel..			

Start Year or Reference Year:	2006	End Year	
Description of Milestone			
On 23rd June 2006, the Belgian Government approves of surface disposal as the final solution for Belgium's low and intermediate level short-lived waste.			

Policies

Country: Belgium, Kingdom of | Reporting Year: 2005

National Systems

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

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

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Belgium, Kingdom of | **Disposal Facilities** | Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Policies

Country: Belgium, Kingdom of **Processing/Storage** Reporting Year: 2005

109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	Yes
112	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
113	Will some or all of the the product(s) of processing/reprocessing be returned to the country of origin?	Yes
114	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?	Yes

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

	Procedures	(Yes;No)
78	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)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
89	Has your Country implemented dedicated disposal facilities for spent SRS?	No

90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for

Brazil

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:43:39

Waste Class Matrix(ces) Used/Defined

Country: Brazil, Federative Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #383: Usage Specification

Usage is specified in the brazilian standard
Norma Técnica CNEN-NN-6.09 "Critérios de Aceitação para Deposição de Rejeitos Radioativos de Baixo e Médio Níveis de Radiação", approved on september 23rd 2002

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	**X**			
processed		**X**	**X**	**X**

Groups Overview

Country: Brazil, Federative Republic of Reporting Year: 2005

Reporting Group: **CNEN**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Comissão Nacional de Energia Nuclear

Site Name	Facility Name	Facilities Defined		
CDTN	CDTN_STR	processing	storage	
CRCN-CO	GCC			disposal
	GR			disposal
IEN	IEN_STR	processing	storage	
IPEN	IPEN_STR	processing	storage	

Reporting Group: **ETN**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Eletrobrás Termonuclear S.A.

Site Name	Facility Name	Facilities Defined		
Angra I	Facility 1	processing		
Angra II	Facility 2	processing	storage	
DIRR	Facility 3		storage	

Reporting Group CNEN, Site Structure: CDTN

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Centro de Desenvolvimento da Tecnologia Nuclear

License Holder(s) : certified facility (safety assessment required)
Operating organization:
Centro de Desenvolvimento da Tecnologia Nuclear
Rua Prof. Mário Werneck s/nº
Belo Horizonte - MG - Brasil
CEP 30123-970

The following list the waste management facilities that are located at this site.

Facility: CDTN_STR

Description	cementing laboratory for immobilizing radioactive liquid waste and testing product quality, bitumization laboratory for tests and a compression equipment for compressible wastes. One hot cell for the dismantling of lightning rods.

Processing part of the "CDTN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970, Estimate

Storage part of the "CDTN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	Yes				
Capacity	CONCRETE SILO WITH 5.048 SPENT SOURCES AND A TOTAL VOLUME OF 97.3 CUBIC METERS AND A TOTAL ACTIVITY OF 7,6 TBq				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
STR_1	building	1970	No	No	No	Yes

Reporting Group CNEN, Site Data: CDTN

Country: Brazil, Federative Republic of | Reporting Year: 2005

Full Name: Centro de Desenvolvimento da Tecnologia Nuclear

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	17.3	0	0	0	100	0	0	0	Yes
LILW-SL	Storage	Yes	2	0	0	0	100	0	0	0	Yes
LILW-LL	Storage	No	10.5	0	43	0	57	0	0	0	Yes
LILW-LL	Storage	Yes	15.8	10.1	68.4	0	21.5	0	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction			same	
Decontamination			same	
Filtration			same	
Segregation/Sorting			same	
Shredding			same	
Size Reduction			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			same	
Cementation			same	
Encapsulation			increase	
Solidification			same	

Reporting Group CNEN, Site Structure: CRCN-CO

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Centro Regional de Ciências Nucleares do Centro-Oeste

License Holder(s) : certified facility (safety assessment required)
Operating organization:
Centro Regional de Ciências Nucleares do Centro-Oeste

The following list the waste management facilities that are located at this site.

Facility: GCC

Description	Great Capacity Container

Disposal part of the "GCC" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1525	Capacity -planned (m3)	1525
Depth (m)	4		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1990	1993
site selection		1991	1993
design		1994	1995
construction		1995	1995
commissioning		1991	1997
operation		1995	1997
closure		1997	1997
institutional control		1997	2047

Reporting Group CNEN, Site Structure: CRCN-CO

Country: Brazil, Federative Republic of Reporting Year: 2005

Facility: GR

Description	Goiânia Repository

Disposal part of the "GR" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1975	Capacity -planned (m3)	1975
Depth (m)	4		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1990	1993
site selection		1991	1993
design		1994	1996
construction		1996	1997
commissioning		1991	1997
operation		1997	1997
closure		1997	1997
institutional control		1997	2047

Reporting Group CNEN, Site Data: CRCN-CO

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Centro Regional de Ciências Nucleares do Centro-Oeste

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	3500	0	0	0	0	0	100	0	No

Reporting Group CNEN, Site Structure: IEN

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Instituto de Engenharia Nuclear

License Holder(s) : certified facility (safety assessment required)
Operating organization:
Instituto de Engenharia Nuclear
Cidade Universitária - Ilha do Fundão
Rio de Janeiro - RJ - Brasil
CEP 21941-590

The following list the waste management facilities that are located at this site.

Facility: IEN_STR

Description	Concrete building with 7560 spent sources equivalent of 114.9 cubic meters and a total activity of 7.6 TBq.

Processing part of the "IEN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970, Estimate

Storage part of the "IEN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
STR_1	building	1970	No	No	No	Yes

Reporting Group CNEN, Site Data: IEN

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Instituto de Engenharia Nuclear

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	48	0	0	0	100	0	0	0	Yes
LILW-LL	Storage	Yes	0.5	0	0	0	100	0	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			increase	
Compaction			same	
Decontamination			same	
Filtration			increase	
Ion Exchange			increase	
Wastewater Treatment			increase	

Processing - Conditioning method(s)

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

Reporting Group CNEN, Site Structure: IPEN

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Instituto de Pesquisas Energéticas e Nucleares

License Holder(s) : certified facility (safety assessment required)
Operating organization:
Instituto de Pesquisas Energéticas e Nucleares
Travessa R, 400 - Cidade Universitária
São Paulo - SP - Brasil
CEP 05508-900

The following list the waste management facilities that are located at this site.

Facility: IPEN_STR

Description	"Unidade Integrada de Tratamento e Armazenamento de Rejeitos" (UITAR). 5.450 spent sources storage equivalent of 350 cubic meters and a total activity of 543 TBq. Includes a hot cell for the dismantling of Am-241 lightning rods and a cementation system.

Processing part of the "IPEN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970, Estimate

Storage part of the "IPEN_STR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
STR_01	building	1970	No	No	No	Yes

Reporting Group CNEN, Site Data: IPEN

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Instituto de Pesquisas Energéticas e Nucleares

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	400	0	0	0	100	0	0	0	Yes
LILW-SL	Storage	Yes	220	0	0	0	100	0	0	0	Yes

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			intermittent	
Compaction			same	
Decontamination			intermittent	
Evaporation			suspended	
Filtration			same	
Ion Exchange			intermittent	
Segregation/Sorting			same	
Shredding and Compaction			intermittent	
Size Reduction			same	
Wastewater Treatment			intermittent	
Water/Acid Washing			intermittent	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			intermittent	
Containerization			same	
Encapsulation			suspended	
Macroencapsulation			intermittent	
Solidification			intermittent	

Reporting Group ETN, Site Structure: Angra I

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

License Holder(s) : Eletronuclear - Eletrobrás Termonuclear S.A
Rua da Candelária, 65, Centro, RJ
CEP: 20091-020
Rio de Janeiro - RJ

The following list the waste management facilities that are located at this site.

Facility: Facility 1

Description	Angra I is a 650 MW PWR and initiated its operation in 1981

Processing part of the "Facility 1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1981

Reporting Group ETN, Site Data: Angra I

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Rinsing			same	
Segregation/Sorting			same	
Shredding and Compaction			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

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

Reporting Group ETN, Site Structure: Angra II

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

License Holder(s) : Eletronuclear - Eletrobrás Termonuclear S.A
Rua da Candelária, 65, Centro, RJ
CEP: 20091-020
Rio de Janeiro - RJ

The following list the waste management facilities that are located at this site.

Facility: Facility 2

Description	Angra II is a 1.300 MW PWR and initiated its operation on January 2000

Processing part of the "Facility 2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2000

Storage part of the "Facility 2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Capacity	Storage divided into two rooms. The first one is the low level waste room whose capacity is 276 cubic meters and the other one is the medium level waste room with capacity to 52.8 cubic meters .

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
KPE	building	2000	No	No	No	No

Reporting Group ETN, Site Data: Angra II

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	32.2	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Rinsing			same	
Segregation/Sorting			same	
Shredding and Compaction			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			same	
Encapsulation			same	

Reporting Group ETN, Site Structure: DIRR

Country: Brazil, Federative Republic of   Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

License Holder(s) : ETN

The following list the waste management facilities that are located at this site.

Facility: Facility 3

Description	Storage of low and intermediate level waste (spent resins, compressible waste, evaporator concentrate, etc)

Storage part of the "Facility 3" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	2375 cubic meters

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DIRR	building	1981	No	No	Yes	No

Reporting Group ETN, Site Data: DIRR

Country: Brazil, Federative Republic of Reporting Year: 2005

Full Name: Central Nuclear Almirante Álvaro Alberto-CNAAA

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	2041	100	0	0	0	0	0	0	No

REGULATORS

Country: Brazil, Federative Republic of

Reporting Year: 2005

Name	CNEN
Full Name	Comissão Nacional de Energia Nuclear
Division	Diretoria de Radioproteção e Segurança
City or Town	Rio de Janeiro

Name	IBAMA
Full Name	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis
Division	
City or Town	Brasília - DF

REGULATIONS / LAWS

Country: Brazil, Federative Republic of Reporting Year: 2005

Name	REG_01	
Title or Name	CRITÉRIOS DE ACEITAÇÃO PARA DEPOSIÇÃO DE REJEITOS RADIOATIVOS DE BAIXO E MÉDIO NÍVEIS DE RADIAÇÃO	
Reference Number	Norma CNEN-NN-6.09	
Date Promulgated or Proclaimed	2002-09-23	Regulation

Comment #6856: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-SL

Name	LAW_01	
Title or Name	Lei nº 10.308, de 20.11.2001	
Reference Number	Lei 10.308	
Date Promulgated or Proclaimed	2001-11-20	Law

Comment #6857: Wastes that are regulated by the Law

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Comment #7514: Lei no. 10.308

Dispõe sobre a seleção de locais, a construção, o licenciamento, a operação, a fiscalização, os custos, a indenização, a responsabilidade civil e as garantias referentes aos depósitos de rejeitos radioativos, e dá outras providências.

Name	REG_02	
Title or Name	Gerência de Rejeitos Radioativos em Instalações Radiativas	
Reference Number	Norma CNEN-NE-6.05	
Date Promulgated or Proclaimed	1985-12-17	Regulation

Comment #6858: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-SL

Name	REG_03	
Title or Name	Seleção e Escolha de Locais para Depósitos de Rejeitos Radioativos	
Reference Number	Norma CNEN-NE-6.06	
Date Promulgated or Proclaimed	1990-01-24	Regulation

Comment #6859: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-LL, LILW-SL

REGULATIONS / LAWS

Country: Brazil, Federative Republic of Reporting Year: 2005

Name	REG_04	
Title or Name	Diretrizes Básicas de Radioproteção	
Reference Number	Norma CNEN-NE-3.01	
Date Promulgated or Proclaimed	1988-08-01	Regulation

Comment #6860: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	REG_05	
Title or Name	Transporte de Materiais Radioativos	
Reference Number	Norma CNEN-NE-5.01	
Date Promulgated or Proclaimed	1988-08-01	Regulation

Comment #6861: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	REG_06	
Title or Name	Radioproteção e Segurança para Deposição Final dos Rejeitos Radioativos Armazenados em Abadia de Goiás	
Reference Number	Instrução Técnica CNEN-IT-01	
Date Promulgated or Proclaimed	1990-12-01	Regulation

Comment #6862: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-SL

Name	REG_07	
Title or Name	Certificação do Atendimento aos Requisitos de Segurança e Radioproteção pelas Instalações Nucleares e pelas Instalações Radiativas da CNEN	
Reference Number	Instrução Normativa IN-CNEN-0001/94	
Date Promulgated or Proclaimed	1994-12-01	Regulation

Comment #6863: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	REG_08	
Title or Name	Licenciamento de Instalações Radiativas	
Reference Number	Norma CNEN-NE-6.02	
Date Promulgated or Proclaimed	1998-06-02	Regulation

Comment #6864: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

REGULATIONS / LAWS

Country: Brazil, Federative Republic of Reporting Year: 2005

Name	REG_09	
Title or Name	Licenciamento de Instalações Nucleares	
Reference Number	Norma CNEN-NE-1.04	
Date Promulgated or Proclaimed	1984-12-14	Regulation

Comment #6865: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	REG_10	
Title or Name	Sistema de Barragem de Rejeitos Contendo Radionuclídeos	
Reference Number	Norma CNEN-NE-1.10	
Date Promulgated or Proclaimed	1980-11-27	Regulation

Comment #6866: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-LL, LILW-SL

Name	REG_11	
Title or Name	Licenciamento de Minas e Usinas de Beneficiamento de Minérios de Urânio e/ou Tório	
Reference Number	Norma CNEN-NE-1.13	
Date Promulgated or Proclaimed	1989-08-08	Regulation

Comment #6867: Wastes that are regulated by the Regulation

Matrix IAEA Def. - LILW-LL, LILW-SL

Name	LAW_02	
Title or Name	Lei no. 4.118, de 27.08.1962	
Reference Number	Lei 4.118	
Date Promulgated or Proclaimed	1962-08-27	Law

Comment #7515: Lei 4.118

Dispõe sobre a política nacional de energia nuclear, cria a Comissão Nacional de Energia Nuclear, e dá outras providências.

REGULATIONS / LAWS

Country: Brazil, Federative Republic of Reporting Year: 2005

Name	LAW_03	
Title or Name	Lei no. 6.189, de 16.12.1974.	
Reference Number	Lei 6.189	
Date Promulgated or Proclaimed	1974-12-16	Law

Comment #7516: Lei 6.189

Nuclear law that establishes rules in this area.
Altera a Lei no. 4.118, de 27 de agosto de 1962, e a Lei no. 5.740, de 1 de dezembro de 1971, que criaram, respectivamente, a Comissão Nacional de Energia Nuclear - CNEN e a Companhia Brasileira de Tecnologia Nuclear - CBTN, que passa a denominar-se Empresas Nucleares Brasileiras Sociedade Anônima - NUCLEBRÁS, e dá outras providências.

Name	LAW_04	
Title or Name	Lei no. 6.938, de 31.08.1981	
Reference Number	Lei 6.938	
Date Promulgated or Proclaimed	1981-08-31	Law

Comment #7517: Lei 6.938

Dispõe sobre a Política Nacional do Meio Ambiente, seus fins e mecanismo de formulação e aplicação, e dá outras providências.

Name	REG_12	
Title or Name	Garantia da Qualidade para Usinas Nucleoelétricas	
Reference Number	Norma CNEN-NN-1.16	
Date Promulgated or Proclaimed	1999-09-21	Regulation

Name	REG_13	
Title or Name	Proteção Física de Unidades Operacionais da Área Nuclear	
Reference Number	Norma CNEN-NE-2.01	
Date Promulgated or Proclaimed	1996-04-19	Regulation

Name	REG_14	
Title or Name	Controle de Materiais Nucleares	
Reference Number	Norma CNEN-NN-2.02	
Date Promulgated or Proclaimed	1999-09-21	Regulation

REGULATIONS / LAWS

Country: Brazil, Federative Republic of Reporting Year: 2005

Name	LAW_05	
Title or Name	Civil Liability Law	
Reference Number	Lei 6.453	
Date Promulgated or Proclaimed	1977-12-17	Law

Policies

Country: Brazil, Federative Republic of | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Partially
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Brazil, Federative Republic of **Disposal Facilities** Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - Some
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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)	Yes
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No

Policies

Country: Brazil, Federative Republic of **Spent SRS** Reporting Year: 2005

88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
89	Has your Country implemented dedicated disposal facilities for spent SRS?	No
90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

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

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

Country Waste Profile Report for

Bulgaria

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:46:35

Waste Class Matrix(ces) Used/Defined

Country: Bulgaria, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #7363: Waste disposal limits

National classification of waste is defined in Regulation 7 and is NOT disposal oriented.
At the same time Regulation 7 specifies alpha activity limits for the waste suitable for near-surface disposal, which are very similar to IAEA classification scheme (an average of 370MBq/t for the facility and up to 3.7 GBq/t for individual waste package). This is the reason to use IAEA matrix when reporting disposed or prepared for disposal waste.

Waste Class Matrix: NPP

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Solid-1	100	0	0
Solid-2	100	0	0
Solid-3	100	0	0
Liquid-1	100	0	0
Liquid-2	100	0	0
Liquid-3	100	0	0

Description: The nuclear power plant has six classes of LILW-SL waste. Solid waste is categorized depending on the dose rate at 0.1 m from the waste's surface and the liquid waste is categorized according to the total activity concentration.

Comment #398: Waste classes

Solid waste is categorized and sorted depending on the gamma dose-rate at 10 cm, as follows:
1st class - up to 0.3 mSv/h
2nd class - 0.3 - 10 mSv/h
3rd class - more than 10 mSv/h
Liquid waste is categorized according to its activity concentration, as follows:
1st class (LLW) - up to 0.37 MBq/l
2nd class (ILW) - 0.37 MBq/l - 37 GBq/l
3rd class (HLW) - more than 37 GBq/l

Attachment #1130: Annex 4 to Regulation 7 of the CUAEPP contains the national classification scheme of solid radioactive waste

File name: Nar7_ANN.pdf

File type: PDF Document

Member State's Reference # Reg7_Ann4

Attachment #1131: Regulation 7 on collecting, storage, processing, keeping, shipment and disposal of radioactive waste on the territory of the Republic of Bulgaria. Article 14 defines the national classification scheme of liquid RW.

File name: NAR7_E.pdf

File type: PDF Document

Member State's Reference # Reg7

Waste Class Matrix(ces) Used/Defined

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Bulgaria, Republic of Reporting Year: 2005

Reporting Group: **INRNE**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Institute for Nuclear Research and Nuclear Energy Reporting Group - Novi Han repository

Site Name	Facility Name	Facilities Defined		
Novi Han	WPF	processing		
	Liquid		storage	
	Stor2000		storage	
	Accidental			disposal
	Biological			disposal
	Solid			disposal
	SRS			disposal

Reporting Group: **KNPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: NPP

Description: Kozloduy NPP Reporting Group

Site Name	Facility Name	Facilities Defined		
KNPP	WTCP	processing		
	AB-1	processing	storage	
	AB-2	processing	storage	
	AB-3	processing	storage	
	CWSF		storage	
	Units 1, 2		storage	
	Units 3, 4		storage	
	WMA-VS		storage	

Reporting Group INRNE, Site Structure: Novi Han

Country: Bulgaria, Republic of Reporting Year: 2005

Full Name:	Novi Han Repository
Location:	Losen Mountain, near the village of Novi Han, altitude 920 m
License Holder(s) :	Institute of Nuclear Reasearch and Nuclear Energy, 72 Tzarigradsko Chaussee Blvd., 1784 Sofia, Bulgaria; tel: ++ 359 2 974 37 61, fax: ++ 359 2 975 36 19, e-mail: INRNE@INRNE.BAS.BG

The following list the waste management facilities that are located at this site.

Facility: WPF

Description	Waste Processing Facility

Processing part of the "WPF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1964

Facility: Liquid

Description	Liquid waste storage tanks

Storage part of the "Liquid" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	4 stainless steel tanks 12 m3 each, total capacity 48 m3				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Liquid	tank (stainless steel)	1964	No	No	Yes	No

Reporting Group INRNE, Site Structure: Novi Han

Country: Bulgaria, Republic of — Reporting Year: 2005

Facility: Stor2000

Description	Storage units for acceptance of waste generated in nuclear applications, built after 2000

Storage part of the "Stor2000" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	Current capacity according to operating license about 950 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
JPK	container (ISO)	2000	No	No	Yes	Yes
PEK	not in list	2000	No	No	Yes	Yes
Type comment:	reinforced concrete box					
GOU	not in list	2001	No	No	Yes	Yes
Type comment:	removable, reinforced concrete cover sitting on a concrete pad to protect items inside					
KUB	not in list	2003	No	No	Yes	Yes
Type comment:	reinforced concrete box					
Lot 4	concrete pad	2000	No	No	No	No

Facility: Accidental

Description	Engineered trench for disposal of LIL solid waste generated during accident (originally planned) and normal operation

Disposal part of the "Accidental" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No

List SRS	No		
Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	3-4		
Host medium	crystalline rock (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1960	1960
site selection		1960	1962
design		1984	1984
construction		1984	1984
commissioning		1984	1984
operation		1984	1994

Additional Activities and Events			
EVENT: operating license suspended		1994	

Reporting Group INRNE, Site Structure: Novi Han

Country: Bulgaria, Republic of Reporting Year: 2005

Facility: Biological

Description	Concrete vault for disposal of biological waste

Disposal part of the "Biological" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	80	Capacity -planned (m3)	80
Depth (m)	3-4		
Host medium	crystalline rock (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1960	1960
site selection		1960	1962
design		1962	1962
construction		1962	1964
commissioning		1964	1964
operation		1964	1994
Additional Activities and Events			
EVENT: operating license suspended		1994	

Reporting Group INRNE, Site Structure: Novi Han

Country: Bulgaria, Republic of Reporting Year: 2005

Facility: Solid

Description	Concrete vault for disposal of solid waste originating from nuclear applications

Disposal part of the "Solid" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	237	Capacity -planned (m3)	237
Depth (m)	3-4		
Host medium	crystalline rock (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1960	1960
site selection		1960	1962
design		1962	1962
construction		1962	1964
commissioning		1964	1964
operation		1964	1994
Additional Activities and Events			
EVENT: operating license suspended		1994	

Reporting Group INRNE, Site Structure: Novi Han

Country: Bulgaria, Republic of | Reporting Year: 2005

Facility: SRS

Description	Concrete vault for disposal of spent SRS.

Disposal part of the "SRS" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	5.5		
Host medium	crystalline rock (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1960	1960
site selection		1960	1962
design		1962	1962
construction		1962	1964
commissioning		1964	1964
operation		1964	1994
Additional Activities and Events			
EVENT: operating license suspended		1994	

Reporting Group INRNE, Site Data: Novi Han

Country: Bulgaria, Republic of Reporting Year: 2005

Full Name: Novi Han Repository

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage Liquid	No	12	0	0	0	100	0	0	0	No
LILW-SL	Storage Stor2000	No	250	0	0	0	100	0	0	0	Yes

Comment #9919: Waste Storage facilities/Class LILW-SL/Site Novi H

Waste in "Liquid" is aqueous with very low activity below the release limits.
Reported waste amount in "Stor2000" is an (rough) estmate since the bulky waste represents less that one quarter of the total volume and the remaining part is spent sealed sources in different containers and devices. Main RNs - Cs-137 and Co-60.

Class	Location Facility	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal Accidental	No	100	0	0	0	100	0	0	0	No
LILW-SL	Disposal Solid	No	120	0	0	0	100	0	0	0	No
LILW-SL	Disposal Biological	Yes	25	0	0	0	100	0	0	0	No

Comment #6535: The additional characteristics of the waste

Unprocessed: solid (dispersible), solid (non-dispersible)
Processed: solid (non-dispersible)

Class	Location Facility	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-LL	Storage Stor2000	No	320	0	0	0	100	0	0	0	No

Comment #9918: Waste Storage facilities/Class LILW-LL/Site Novi H

Waste amount is an (rough) estamate since this waste consists mostly of sealed sources of low activity in their original hosting devices (smoke detectors, etc.), subject of future dismantling and segregation. Main RNs: Am-241 and Pu-239.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Segregation/Sorting			same	
Wastewater Treatment	Yes			

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Encapsulation	Yes			
Grouting				Yes

Reporting Group KNPP, Site Structure: KNPP

Country: Bulgaria, Republic of Reporting Year: 2005

Full Name:	Kozloduy NPP
Location:	North-western Bulgaria, 3.5 km south-east from the town of Kozloduy;
License Holder(s) :	Kozloduy NPP Plc., 3321 Kozloduy, Bulgaria - for facilities: Units 1,2, Units 3,4, AB-1, AB-2 and AB-3 State Eneterprise "Radioactive Waste", 51 James Baucher Blvd., 1407 Sofia - for facilities: WMA-VS, WTCP and CWSF

The following list the waste management facilities that are located at this site.

Facility: WTCP

Description	Waste Processing Plant for treatment and conditioning of solid and liquid waste originating from Kozloduy NPP, located on site.

Processing part of the "WTCP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2001

Facility: AB-1

Description	Auxiliary Building, part of original design of Units 1 and 2. Processing of operational liquid waste and storage of solid waste, liquid waste and spent sorbents.

Processing part of the "AB-1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1974

Storage part of the "AB-1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	Yes	Yes	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	Yes	Yes	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Capacity	Solid waste - 7 bunkers with total capacity of 1010 m3 Liquid waste - 5 x 470 m3 High activity sorbents - 2 x 350 m3 Low activity sorbents - 2 x 188 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Solid 1-7	bunker	1974	No	No	No	No
Liquid-all	tank (stainless steel)	1974	No	No	No	No

Comment #9923: Solid-1 and solid-2 classes

No separation is made on site between solid-1 and solid-2 waste classes. Since major part of the waste is estimated to be solid-1 class, all wastes of these two classes is reported as solid-1. Same comment is valid for the following facilities: AB-2, AB-3, CWSF, WMA-VS.

Reporting Group KNPP, Site Structure: KNPP

Country: Bulgaria, Republic of Reporting Year: 2005

Facility: AB-2

Description	Auxiliary Building, part of original design of Units 3 and 4. Processing of operational liquid waste and storage of solid waste, liquid waste and spent sorbents.

Processing part of the "AB-2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1980

Storage part of the "AB-2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	Yes	Yes	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	Yes	Yes	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Capacity	Solid waste - 7 bunkers with total capacity of 1010 m3 Liquid waste - 5 x 470 m3 High activity sorbents - 2 x 350 m3 Low activity sorbents - 2 x 188 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Solid 1-7	bunker	1980	No	No	No	No
Liquid-all	tank (stainless steel)	1980	No	No	No	No

Facility: AB-3

Description	Auxiliary Building, part of original design of Units 5 and 6. Processing of operational liquid waste and storage of solid waste, liquid waste and spent sorbents.

Processing part of the "AB-3" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1987

Storage part of the "AB-3" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	Yes	Yes	Solid-2	No	No
Solid-3	Yes	Yes	Liquid-1	No	No
Liquid-2	Yes	Yes	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Capacity	Solid-1 and solid-2: 2486 m3 Solid-3: 213 m3 Liquid: 3600 m3 Spent sorbents: 2 x 100 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Solid	bunker	1987	No	No	No	No
Liquid	tank (stainless steel)	1987	No	No	No	No

Facility: CWSF

Description	Storage facility for conditioned waste (from WTCP)

Storage part of the "CWSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	Yes	Yes	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				

Capacity	1920 containers with a total volume of 8 m3 each, including the container. Internal volume (capacity) of one container is 5 m3.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CWSF	building	2002	No	No	No	No

Reporting Group KNPP, Site Structure: KNPP

Country: Bulgaria, Republic of Reporting Year: 2005

Facility: Units 1, 2

Description	Storage facility for class "solid-3" operational waste located in the reactor hall of units 1 and 2

Storage part of the "Units 1, 2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	Yes	Yes	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				
Capacity	81.6 m3				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Units 1, 2	silo	1974	No	No	No	No

Facility: Units 3, 4

Description	Storage facility for class "solid-3" operational waste located in the reactor hall of units 3 and 4

Storage part of the "Units 3, 4" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	No	No	Solid-2	No	No
Solid-3	Yes	Yes	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			
List SRS?	No				
Capacity	81.6 m3				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Units 3, 4	silo	1980	No	No	No	No

Reporting Group KNPP, Site Structure: KNPP

Country: Bulgaria, Republic of Reporting Year: 2005

Facility: WMA-VS

Description	Waste Management Storage Area "Varovo Stopanstvo"

Storage part of the "WMA-VS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Solid-1	Yes	Yes	Solid-2	No	No
Solid-3	No	No	Liquid-1	No	No
Liquid-2	No	No	Liquid-3	No	No
SRS	No	No			

List SRS?	No
Capacity	Total capacity: 11 929 m3.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
VS	building	1992	No	Yes	No	No
GTK	container (marine)	1999	No	No	Yes	No
HRAO	bunker	1979	No	No	No	No
OP	concrete pad	1994	No	No	No	No

Reporting Group KNPP, Site Data: KNPP

Country: Bulgaria, Republic of Reporting Year: 2005

Full Name: Kozloduy NPP

Inventory Reporting Date: December 2005 Waste Matrix: NPP

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Solid-1	Storage AB-1	No	534	100	0	0	0	0	0	0	No
Solid-1	Storage AB-2	No	100	100	0	0	0	0	0	0	No
Solid-1	Storage WMA-VS	No	3148	100	0	0	0	0	0	0	No
Solid-1	Storage AB-2	Yes	120	100	0	0	0	0	0	0	No
Solid-1	Storage AB-3	Yes	1086	100	0	0	0	0	0	0	No
Solid-1	Storage CWSF	Yes	1840	100	0	0	0	0	0	0	No
Solid-1	Storage WMA-VS	Yes	1755	100	0	0	0	0	0	0	No
Solid-3	Storage AB-3	No	12	100	0	0	0	0	0	0	No
Solid-3	Storage Units 1, 2	No	53	100	0	0	0	0	0	0	No
Solid-3	Storage Units 3, 4	No	33	100	0	0	0	0	0	0	No
Liquid-2	Storage AB-1	No	2497	100	0	0	0	0	0	0	No
Liquid-2	Storage AB-2	No	2202	100	0	0	0	0	0	0	No
Liquid-2	Storage AB-3	No	2818	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination	Yes			
Evaporation			same	
Filtration			same	
Incineration		Yes		
Ion Exchange			same	
Shredding and Compaction			same	
Super Compaction			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization		Yes		
Cementation			increase	
Containerization			increase	
Grouting			increase	

REGULATORS

Country: Bulgaria, Republic of

Reporting Year: 2005

Name	NRA
Full Name	Nuclear Regulatory Agency
Division	
City or Town	

Comment #6525: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP - Liquid-1, Liquid-2, Liquid-3, Solid-1, Solid-2, Solid-3

Attachment #1132: General description of NRA organization

File name: 2003_App_NRA1.doc

File type: MS Office Document

Member State's Reference # NRA1

Attachment #1133: NRA organizational structure

File name: 2003_App_NRA2.doc

Member State's Reference # NRA2

REGULATIONS / LAWS

Country: Bulgaria, Republic of | Reporting Year: 2005

Name	ASUNE	
Title or Name	Act on the Safe Use of Nuclear Energy	
Reference Number		
Date Promulgated or Proclaimed	2002-06-28	Law

Comment #6526: Wastes that are regulated by the ASUNE

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Attachment #1134: Act on the Safe Use of Nuclear Energy - full text

File name: Act_eng.pdf

File type: PDF Document

Member State's Reference # ASUNE

Name	RW Safety	
Title or Name	Regulation for safe management of radioactive waste	
Reference Number		
Date Promulgated or Proclaimed	2004-08-03	Regulation

Comment #6527: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Attachment #1137: Regulation for Safe Management of Radioactive Waste

File name: Reg_RW_Engl.doc

File type: WordPerfect Document

Member State's Reference # Reg_Waste

Name	SE "RW"	
Title or Name	Regulation for the conditions and procedure for transfer of radioactive waste to the state enterprise “Radioactive Waste”	
Reference Number	BNRP-2000	
Date Promulgated or Proclaimed	2004-07-14	Regulation

Comment #6529: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Comment #9701: Matters arranged by the Regulation SE

The entities, which generate radioactive waste as a result of their activities, are obliged to transfer the waste to the State enterprise, which is responsible for the management of the radioactive waste after the deposit.
The regulation defines the conditions and procedure for transferring the radioactive waste to the State enterprise “Radioactive Waste” and the terms for the transfer, as well as the radioactive waste not eligible for transfer. Specific procedures are defined for transferring radioactive waste generated from previous activities, radioactive waste with unknown owner, or which has been imported to the country and cannot be returned.
The radioactive waste becomes state property at the moment of its transfer to the State enterprise.

REGULATIONS / LAWS

Country: Bulgaria, Republic of Reporting Year: 2005

Name	NPP Safety	
Title or Name	Regulation for providing the safety of nuclear power plants	
Reference Number		
Date Promulgated or Proclaimed	2004-07-19	Regulation

Comment #6530: Matters arranged by the Regulation

The regulation settles the matters related to the basic criteria and rules for the safety of nuclear power plants based on the concept of in-depth defense.
Subject to regulation are the organizational measures and technical requirements for providing of the safety during site selection, design, construction, commissioning and operation of nuclear power plants. The regulation contains detailed instructions related to the determination of the design basis and safety evaluations, the characteristics of the site and the safety requirements for the nuclear power plant and its systems.
The regulation is developed based on the IAEA safety standards and the reference levels for harmonization of the safety requirements for nuclear power plans, defined by the West European Nuclear Regulators' Association (WENRA).

Name	SIR Safety	
Title or Name	Regulation for radiation protection during activities with sources of ionizing radiation	
Reference Number		
Date Promulgated or Proclaimed	2004-08-04	Regulation

Comment #9702: Matters arranged by the Regulation SIR Safety

The regulation defines the basic requirements and rules for radiation protection during activities with sources of ionizing radiation and the condition and the procedure for accounting of the sources of ionizing radiation. The regulation puts in place requirements for radiation monitoring during activities with sources of ionizing radiation.
The regulation specifies technical and organizational rules for conforming to the established in Bulgaria basic norms for radiation protection.

Name	Licensing	
Title or Name	Regulation for the procedure for issuing licenses and permits for safe use of nuclear energy	
Reference Number		
Date Promulgated or Proclaimed	2004-05-04	Regulation

Comment #6532: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Comment #9703: Matters arranged by the Regulation Licensing

The regulation defines all matters related to the procedures for issuing, changing, renewing, canceling, revoking and controlling the licenses and permits demanded by the Safe Use of Nuclear Energy Act. The structure of the regulation takes into consideration the specifics of the types of nuclear facilities, activities and sites with sources of ionizing radiation. The scope and contents of the required documents is specified taking into account the necessary measures for providing the nuclear safety, radiation and physical protection. For activities with certain types of ionizing radiation sources, based on the lower risk for the population and the environment, alleviations of the required documents is provided.

REGULATIONS / LAWS

Country: Bulgaria, Republic of Reporting Year: 2005

Name	Emergency	
Title or Name	Regulation for emergency planning and emergency preparedness in case of nuclear and radiation accident	
Reference Number		
Date Promulgated or Proclaimed	2004-07-30	Regulation

Comment #6533: Matters arranged by the Regulation

The regulation defines, in accordance to the provisions of the Safe Use Of Nuclear Energy Act, the conditions and procedure for developing emergency plans and the obligations of the persons who apply them.
The actions and measures for limitation and liquidation of the consequences of nuclear or radiation accident are also defined as well as the criteria for decision taking for their activation and the methods for informing the population. Subject to definition is also the maintenance and control of the emergency preparedness and the interaction between the executive authorities and the licensees or holders of permits according to the Safe Use of Nuclear Energy Act.

Name	BNRP	
Title or Name	Regulation for the basic norms for radiation protection	
Reference Number	Reg.10	
Date Promulgated or Proclaimed	2004-07-30	Regulation

Comment #9704: Matters arranged by the Regulation BNRP

The regulation reflects the requirements of the 96/29/EURATOM Directive, setting the basic standards for protecting the health of personnel and population from the damaging influence of ionizing radiation. The basic principles of radiation protection are developed, and the dose limits for personnel and population are set.
In accordance with the provisions of the Directive, the concept for releasing from control of radioactive substances due to permitted activities, and the concept for limitation of irradiation are introduced.
The Regulation sets requirements for monitoring of the working quarters, and the individual irradiation, as well as for the registration of the results of this monitoring.
The requirements of Directive 90/641/EURATOM for operational protection of outside workers from the damaging influence of ionizing radiation during their activities in the controlled areas are introduced.
In relation to the engagements of the Bulgarian side in the negotiations with the European Union, the Regulation introduces the basic principles and requirements for radiation protection from medical irradiation, taking into consideration Directive 84/466/EURATOM for health protection from the damaging influence of ionizing radiation from medical irradiation.

REGULATIONS / LAWS

Country: Bulgaria, Republic of Reporting Year: 2005

Name	Security	
Title or Name	Regulation for the provision of physical protection of nuclear facilities, nuclear material and radioactive substances	
Reference Number		
Date Promulgated or Proclaimed	2004-08-25	Regulation

Comment #9706: Matters arranged by the Regulation Security

In the Regulation, according to the Safe use of nuclear energy Act and the convention for physical protection of nuclear material, the matters related to physical protection of nuclear facilities, and during use, storage and transportation of nuclear materials and radioactive substances are defined.
The provisions of the Regulation take into consideration the specifics of the different kinds of nuclear facilities, nuclear materials and radioactive substances, which demand different levels of physical protection, depending on the category of nuclear materials and radioactive substances and the degree of risk.

Name	Funding	
Title or Name	Regulation for the procedure for assessment, collection, spending and control of the financial resources and definition of the amount of contributions due on the “Radioactive waste” Fund	
Reference Number		
Date Promulgated or Proclaimed	2003-12-17	Regulation

Comment #9707: Matters arranged by the Regulation Funding

The regulation determines the procedure for assessment, collection, spending and control of the financial resources and definition of the amount of contributions due on the “Radioactive waste” Fund under auspices of the Minister of Energy and Energy Resources. The Fund is managed in a manner to assure implementation of the activities for radioactive waste management. The revenues of the Fund are collected mainly from contributions from legal and physical entities, which generate radioactive waste, due for transfer to the state enterprise “Radioactive waste”, as a result of their activities as well as from national budget resources, allocated annually pursuant to the National Budget Act for the relevant year.

Name	Notifictn	
Title or Name	Regulation of the conditions and procedure for notification of the NRA about events in nuclear facilities and sites with sources of ionizing radiation	
Reference Number		
Date Promulgated or Proclaimed	2004-07-30	Regulation

Comment #9708: Matters arranged by the Regulation Notifictn

The regulation defines the obligations of the licensee or the holder of a permit for creation of a system for collecting, registration, investigation, analysis and evaluation of events and determination of corrective measures.
Also defined are the requirements for usage of the information about events, including for analysis of the operational experience, determining of the importance of the events for safety, as well as the procedure and terms for providing information to the citizens for events of different importance.

MILESTONES

Country: Bulgaria, Republic of Reporting Year: 2005

Start Year or Reference Year:	1961	End Year	
Description of Milestone			
Commissioning of IRRT-2000 research reactor, located in Sofia and operated by the Bulgarian Academy of Science			

Start Year or Reference Year:	1964	End Year	
Description of Milestone			
Commissioning of Novi Han reporsitory for LILW from the operation of IRRT-2000 research reactor and from the isotope applications			

Start Year or Reference Year:	1974	End Year	
Description of Milestone			
Commissioning of Kozloduy NPP unit 1 (VVER-440, model 230), followed by unit 2 (VVER-440/230) in 1975, unit 3 (VVER-440/230) in 1980, unit 4 (VVER-440/230) in 1982, unit 5 (VVER-1000/320) in 1987 and unit 6 (VVER-1000/320) in 1989			

Start Year or Reference Year:	1991	End Year	1994
Description of Milestone			
Research for selection of perspective sites for disposal of radioactive waste conducted. As a result 7 sites are determined and criteria for final site selection elaborated. Results are compiled in "Conception for National Repository for Radioactive Waste"			

Start Year or Reference Year:	1994	End Year	
Description of Milestone			
Operation of Novi Han repository suspended by the regulator with prescription for improvements			

Start Year or Reference Year:	1996	End Year	1997
Description of Milestone			
Implementation of big international project "Radioactive waste management in Bulgaria"			

Start Year or Reference Year:	1997	End Year	
Description of Milestone			
Program for upgrading the Novi Han repository started, financed by the operator, the regulator and the state budget, with the support of IAEA TC Project BUL/4/005 "Increasing Safety of Novi Han Repository"			

Start Year or Reference Year:	1999	End Year	
Description of Milestone			
Future investigations for disposal site selection for LILW from Kozlody NPP operation finalized. One site recommended as most perspective			

Start Year or Reference Year:	2002	End Year	2003
Description of Milestone			
Implementation of commissioning programme of waste processing plant on Kozloduy NPP site			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
Final shut-down of Units 1 and 2 of Kozloduy NPP for decommissioning			

Start Year or Reference Year:	2003	End Year	2005
Description of Milestone			
Test operation of waste processing plant on Kozloduy NPP site			

MILESTONES

Country: Bulgaria, Republic of Reporting Year: 2005

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
Establishment and start of operations of the State Enterprise "Radioactive Waste" responsible for the off-site management of radioactive waste at national level.			

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
Adoption of governmental Strategy for management of spent fuel and radioactive waste			

Start Year or Reference Year:	2005	End Year	
Description of Milestone			
Operating license issued for the waste management facility on Kozloduy site. Licensee - State Eneterprise "Radioactive Waste" (SERAW).			

Country Waste Profile Report for

Canada

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:51:38

Waste Class Matrix(ces) Used/Defined

Country: Canada Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: NRCan

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LLW	0	100	0
NuclearFuel	0	0	100
Tailings	0	100	0

Description: Radioactive waste is grouped into three categories: nuclear fuel waste, low-level radioactive waste (LLW), and uranium mill tailings. Since fuel and tailings are outside of the NEWMDB scope, only LLW will be reported. The % cited are a first order estimate and will be updated in a future submission. Please refer to the comment that is included for this matrix.

Comment #7426: Waste Classification in Canada

The classification of radioactive waste in Canada is described in the report "Inventory of Radioactive Waste in Canada", issued in 2004 by the Low Level Radioactive Waste Management Office (LLRWMO); publication LLRWMO-01613-041-10001

The definition of LLW is based on exclusion. It is all radioactive waste that is neither spent fuel nor uranium mill tailings. Therefore, LLW includes items ranging from very low activity waste from research facilities, hospitals and universities up to highly active waste such as ion exchange resins from reactor liquid clean up systems, irradiated reactor core components and CANDU "retubing" waste.

Historic waste is LLW that was managed in the past in a manner no longer considered acceptable but for which the owner cannot reasonably be held responsible and for which the federal government has accepted responsibility.

Attachment #1138: Inventory of Radioactive Waste in Canada (2004)

This report presents the inventory of radioactive waste in Canada to the end of 2003. It provides an review on the production, accumulation and projections of radioactive waste in Canada.

File name: Inventory_Report_2004.pdf

File type: PDF Document

Member State's Reference # LLRWMO-01613-041-10001

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				
processed				

Groups Overview

Country: Canada Reporting Year: 2005

Reporting Group: **National**

Inventory Reporting Date: December 2005

Waste Matrix Used: NRCan

Description: The national inventory of radioactive waste in Canada is reported according to "on going" and "historical" waste. For reporting to the NEWMDB (to allow traceability), two "theoretical sites" are defined: ONGOING and HISTORICAL

Site Name	Facility Name	Facilities Defined		
HISTORIC	CCPTSS		storage	
	CSP		storage	
	FMLTMF		storage	
	FSISM		storage	
	JSM		storage	
	LRSM		storage	
	PGWMF		storage	
	PSECS		storage	
	PSETSS		storage	
	PSSM		storage	
	PTSS		storage	
	SSRCS		storage	
	STPTSS		storage	
	TISM		storage	
	WWMF		storage	
ONGOING	BNPD-CMLF	processing		
	Monserco	processing		
	AECL-CRL	processing	storage	
	BNPD-WWMF	processing	storage	
	AECL-WL		storage	
	BNPD-RWOS1		storage	
	HQWMF		storage	
	Pickering		storage	
	PLWMF		storage	

REGULATORS

Country: Canada

Reporting Year: 2005

Name	CNSC
Full Name	Canadian Nuclear Safety Commission
Division	
City or Town	Ottawa

REGULATIONS / LAWS

Country: Canada Reporting Year: 2005

Name	NSCA	
Title or Name	Nuclear Safety and Control Act	
Reference Number	Statutes of Canada, 1997	
Date Promulgated or Proclaimed	2000-05-31	Law

Comment #7478: NSCA

Nuclear Safety and Control Act: Canadian federal legislation on the regulation, development and use of nucelar energy and the production, possession and use of nuclear substances, prescribed equipment and prescribed information.

Name	GNSCR	
Title or Name	General Nuclear Safety and Control Regulations	
Reference Number	SOR/2000-202	
Date Promulgated or Proclaimed	2000-05-31	Regulation

Comment #7479: GNSCR

General Nuclear Safety and Control Regulations: Canadian federal regulations respecting licensing of nuclear activities,

Name	RPR	
Title or Name	Radiation Protection Regulations	
Reference Number	SOR/2000/203	
Date Promulgated or Proclaimed	2000-05-31	Regulation

Comment #7480: RPRegs

Radiation Protection Regulations: Canadian federal regulations on radiation protection relating to all nuclear facilities.

Name	NSR	
Title or Name	Nuclear Security Regulations	
Reference Number	SOR/2000-209	
Date Promulgated or Proclaimed	2000-05-31	Regulation

Comment #7483: NSRegs

Nuclear Security Regulations: Canadian federal regulations dealing with security aspects of all nuclear material and facilities.

REGULATIONS / LAWS

Country: Canada Reporting Year: 2005

Name	PTNSRegs	
Title or Name	Packaging and Transport of Nuclear Substances Regulations	
Reference Number	SOR/2000-208	
Date Promulgated or Proclaimed	2000-05-31	Regulation

Comment #7484: PTNSRegs

Packaging and Transport of Nuclear Substances Regulations: Canadian federal regulations dealing with the packing and transport of nuclear substances, including nuclear wastes.

Name	NNPIECRegs	
Title or Name	Nuclear Non-Proliferation Import and Export Control Regulations	
Reference Number	SOR/2000/210	
Date Promulgated or Proclaimed	2000-05-31	Regulation

Name	NFWA	
Title or Name	Nuclear Fuel Waste Act	
Reference Number	Statutes of Canada 2002	
Date Promulgated or Proclaimed	2002-11-15	Law

Comment #9930: NFWA

The NFWA requires nuclear energy corporations to establish a waste mangement organization to
a) propose to the government of Canada approaches for the management of nuclear fuel waste, and
b) implement the approach

MILESTONES

Country: Canada

Reporting Year: 2005

Start Year or Reference Year:	2000	End Year	
Description of Milestone			
Entry into force of the Canadian Nuclear Safety Control Act and related regulations			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
Entry into force of the Nuclear Fuel Waste Act - Report submitted to the federal government in November 2005.			

Policies

Country: Canada Reporting Year: 2005

National Systems

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

Comment #7486: P-290

Managing Radioactive Waste. Policy of the Canadian Nuclear Safety Commission put in place July 2004

Comment #7487: P-223

Protection of the Environment: Policy of the Canadian Nuclear Safety Commission relating to environmental protection from nuclear activities. Put in place February 2001

Comment #7488: R-71

Deep Geological Disposal of Nuclear Fuel Waste: Regulatory Policy document of the Canadian Nuclear Safety Commission, January 1985

Comment #7489: R-85

Radiation Protection Requisites for Exemption of Certain Radioactive Materials from further Licensing Upon Transerral for Disposal. Regulatory Policy document of the Canadian Nuclear Safety Commission, August 1989

Comment #7490: R-72

Geological Considerations for Siting a Repository for Underground Disposal of High-Level Radioactive Waste. Regulatory Policy document of the Canadian Nuclear Safety Commission, September 1987.

Comment #9821: Policy Framework for Radioactive Waste

Radioactive waste policy framework that will guide Canada's approach for radioactive waste disposal-1996
Natural Resources Canada

Comment #9822: G-320

Draft guide of the Canadian Nuclear Safety Commission entitled "Assessing The Long Term Safety of Radioactive Waste Management" April 2005

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

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes

10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Comment #7501: relevant legislation

These requirements are covered in federal legislation, the Nuclear Safety and Control Act, and regulations.

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes

36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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)?	No

Disposal Facilities

Licensing (Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes

Policies

Country: Canada **Disposal Facilities** Reporting Year: 2005

If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.

52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Comment #7502: specification in licenses

These requirements are generally noted in the General Nuclear Safety Regulations and are specifically addressed in each individual licence for a waste management facility.

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	No
61	waste minimization	No
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

Policies

Country: Canada **Spent SRS** Reporting Year: 2005

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	not answered
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Comment #7504: federal regulations

Federal regulations cover release and disposal of all radioactive materials: General Nuclear Safety and Control Regulations and the Radiation Protection Regulations.

Import-Export

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

Comment #7492: Import-Export

Nuclear Non-Proliferation Import and Export Control Regulations made pursuant to the Canadian Nuclear Safety and Control Act. Administered by the Canadian Nuclear Safety Commission.

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

Comment #7503: relevant regulations

Federal regulations made pursuant to legislation: Nulcear Non-Proliferation Import and Export Control Regulations

Liquid HLW

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

	Processing	(Yes - All;Yes - Some;No)
94	If your Country has high-level liquid wastes in storage, are there documented plans in place to process these liquids?	No

	Timeframe	(Yes - All;Yes - Some;No)
95	If your Country has high-level liquid wastes in storage, are there plans to have this waste be processed within a specified time frame?	No

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

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

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

Country Waste Profile Report for

Chile

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 15:52:13

Waste Class Matrix(ces) Used/Defined

Country: Chile, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: CHILECLASS

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
CATEGORY 1	98	2	0
CATEGORY 2	100	0	0

Description: CATEGORY 1:ALFA EMITTERS, WHATEVER PERIOD OR HALF LIFE
CATEGORY 2: BETA, GAMMA EMITTERS, HALF LIFE LONGER THAN 100 DAYS

Comment #141: Category 1

The distribution of activities relative to the IAEA scheme was based upon known activities of low activity uranium containing waste. Most of this waste has activities below 400 Bq/g, therefore it is considered as near surface disposal waste (i.e. LILW-SL). Some Americium 241 waste from neutron generators and guages have activities >4000 Bq/g. This is LILW-LL (about 2% by volume)

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Chile, Republic of   Reporting Year: 2005

Reporting Group: **UGDR**

Inventory Reporting Date: December 2005

Waste Matrix Used: CHILECLASS

Description: UGDR is organized under Chilean Comission for Nuclear Energy (CCHEN) and it is charged with the processing research and developing, as also the operations for collection, treatment, conditioning and storage of all radioactive waste produced in the country due to its own nuclear development which is solely for peaceful purposes. UGDR centralizes its activites in the Metropolitan Region of Santiago, to give the service to all radioactive waste producers in the country.

Site Name	Facility Name	Facilities Defined		
CEN LA	PTDR	processing		
	IADRA		storage	
CEN LR	Caseta LR		storage	
	PozoLR		storage	

Reporting Group UGDR, Site Structure: CEN LA

Country: Chile, Republic of | Reporting Year: 2005

Full Name: Centro de Estudios Nucleares Lo Aguirre

License Holder(s) :
Not licensed.
Owner:Comision Chilena de Energia Nuclear
Casilla 188-D
Santiago, Chile
Facility operatori: Radioactive Waste Management Section

The following list the waste management facilities that are located at this site.

Facility: PTDR

Description	Planta de Tratamiento de Desechos Radiactivos, where spent sealed sources, compactible waste, heterogeneous and liquid waste are processed.

Processing part of the "PTDR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
CATEGORY 1	No	No	CATEGORY 2	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1992

Facility: IADRA

Description	Instalacion de Almacenamiento de Desechos Radiactivos Acondicionados

Storage part of the "IADRA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
CATEGORY 1	Yes	Yes	CATEGORY 2	Yes	Yes
SRS	Yes	No			
List SRS?	Yes				
Capacity	It was designed to stand conditioned waste packages stored for disposal. Capacity: 42 m3.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
IADRA	building	1990	No	No	No	Yes

Reporting Group UGDR, Site Data: CEN LA

Country: Chile, Republic of Reporting Year: 2005

Full Name: Centro de Estudios Nucleares Lo Aguirre

Inventory Reporting Date: December 2005 Waste Matrix: CHILECLASS

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
CATEGORY 1	Storage IADRA	Yes	5.6	0	0	0	86	0	0	14	No
CATEGORY 2	Storage IADRA	No	6	95	0	0	5	0	0	0	No
CATEGORY 2	Storage IADRA	Yes	3.2	0	0	0	100	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation	Yes			
Compaction			decrease	
Shredding			increase	
Size Reduction			increase	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			same	
Containerization			same	
Encapsulation			decrease	

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Kr-85	1			No	Yes	0	5.50E-04	2005.12
	5.50E-04							
Cm-244		1		No	Yes	0	8.80E+00	2004.12
		8.80E+00						
Pm-147	1			No	Yes	0	1.50E+00	2004.12
	1.50E+00							
Cs-137	38			Yes	No	0	5.90E+00	2005.12
	5.90E+00							
Cs-137		4		Yes	No	0	4.35E+01	2004.12
		4.35E+01						
Cs-137	6			Yes	No	0	6.77E+00	2004.12
	6.77E+00							
Co-60		3		Yes	No	0	5.54E+04	2004.12
		5.54E+04						
Fe-55	2			No	Yes	0	4.98E-01	2003.12
	4.98E-01							
Co-60		9		No	Yes	0	1.33E+05	2003.12
		1.33E+05						

Reporting Group UGDR, Site Data: CEN LA

Country: Chile, Republic of Reporting Year: 2005

Cd-109	1			No	Yes	0	4.00E-04	2000.12
	4.00E-04							
Cs-137	14	13		No	Yes	0	4.15E+02	2003.12 (estimate)
	3.58E+01	3.79E+02						
Cs-137	159	14		Yes	No	0	1.92E+02	2003.12 (estimate)
	8.20E+01	1.10E+02						
Sr-90	10			No	Yes	0	4.00E+00	2000.12
	4.00E+00							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241	2		No	Yes	0	3.60E+00	2005.12
	3.60E+00						
Am-241	1		No	Yes	0	1.85E+00	2004.12
	1.85E+00						
Am-241 Neutron Gen.		1	No	Yes	0	3.70E+00	2004.12
		3.70E+00					
Am-241 Neutron Gen.	1		No	Yes	0	1.85E+00	2004.12
	1.85E+00						
Ra-226	2		No	Yes	0	5.55E-04	2005.12
	5.55E-04						
Pu-238	1		No	Yes	0	8.50E-01	2005.12
	8.50E-01						
Ra-226	253		Yes	No	0	2.00E+01	2005.12
	2.00E+01						
Pu-238		1	No	Yes	0	3.70E+00	2004.12
		3.70E+00					
Ra-226	2		No	Yes	0	3.40E-01	2003.12
	3.40E-01						
Pu-238	1		No	Yes	0	1.10E+00	2003.12
	1.10E+00						
Am-241	25		Yes	No	0	3.00E+01	2000.12
	3.00E+01						
Ra-226	319		Yes	No	0	7.80E+01	2000.12
	7.80E+01						

Reporting Group UGDR, Site Structure: CEN LR

Country: Chile, Republic of — Reporting Year: 2005

Full Name: Centro de Estudios Nucleares La Reina

License Holder(s) :
Not licensed
Owner: Chilean comission for Nuclear Energy
Waste operating: Radioactive Waste Management Se ction

The following list the waste management facilities that are located at this site.

Facility: Caseta LR

Description	Instalacion de almacenamiento de desechos no acondicionados. (En espera de tratamiento t1/2 > 100 dias; y en decaimiento t1/2 <100 dias)

Storage part of the "Caseta LR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
CATEGORY 1	Yes	Yes	CATEGORY 2	Yes	Yes
SRS	Yes	No			
List SRS?	Yes				
Capacity	Storage capacity: 10 m3 -Interim storage				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Caseta LR	building	1977	No	No	No	Yes

Facility: PozoLR

Description	Pozo subterráneo de concreto para guardar desechos radiactivos en espera de tratamiento en CEN La Reina

Storage part of the "PozoLR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
CATEGORY 1	Yes	No	CATEGORY 2	Yes	No
SRS	No	No			
List SRS?	No				
Capacity	Capacity is 10 m3 - Interim storage.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Pozo LR	trench (lined)	1979	No	Yes	No	No

Reporting Group UGDR, Site Data: CEN LR

Country: Chile, Republic of Reporting Year: 2005

Full Name: Centro de Estudios Nucleares La Reina

Inventory Reporting Date: December 2005 Waste Matrix: CHILECLASS

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
CATEGORY 1	Storage	No	0.1	0	0	0	100	0	0	0	No
CATEGORY 2	Storage	No	10	60	0	0	40	0	0	0	No

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-90	9			No	Yes	0	5.60E+00	2000.12
	5.60E+00							
Kr-85	6	3		No	Yes	0	2.63E+01	2003.12
	1.23E+01	1.40E+01						
Co-60	3			No	Yes	0	1.10E+00	2000.12
	1.10E+00							
Cs-137	26	11		No	Yes	0	1.03E+03	2000.12
	3.30E+01	1.00E+03						

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	6		No	Yes	0	1.90E+00	2003.12
	1.90E+00						
Am-241	11	5	No	Yes	0	5.33E+01	2003.12
	9.75E+00	4.35E+01					

REGULATORS

Country: Chile, Republic of

Reporting Year: 2005

Name	C.Ch.E.N.
Full Name	Chilean Comission for Nuclear Energy
Division	Radiological & Nuclear Safety Department
City or Town	Santiago de Chile

REGULATIONS / LAWS

Country: Chile, Republic of Reporting Year: 2005

Name	Law 18.302	
Title or Name	Ley de Seguridad Nuclear Nº 18.302 (Nuclear safety Law Nº 18.302)	
Reference Number	Law Nº 18.302	
Date Promulgated or Proclaimed	1984-05-02	Law

Comment #231: Definition

Nuclear safety law defines Radioactive waste as all radioactive materials obtained while production process or use of nuclear fuel, or, materials whose radioactivity arises from the radiation exposure of the process, the radioisotopes which have become to final step in its elaboration, are going to be rejected.
Also, the Law defines radioactive material as every material that has an specific activity higher than 0.002 Ci per gram.

Comment #232: Definition

Nuclear safety law defines Radioactive waste as all radioactive materials obtained while production process or use of nuclear fuel; or, materials whose radioactivity arises from the radiation exposure of the process; and the radioisotopes which have become to final step in its elaboration, which are going to be rejected.
Also, the Law defines radioactive material as every material that has an specific activity higher than 0.002 Ci per gram.

Name	Reg 133	
Title or Name	Reglamento sobre autorizaciones para instalaciones radiactivas o equipos generadores de radiaciones inizantes y personal que se desempeña en ellas, u opere tales equipos u otras actividades afines. (Regulation on authorization for radioactive facilities or ionizing radiation generation equipments and people working there, or who operate those equipments and other related activities).	
Reference Number	Regl. Nº 133	
Date Promulgated or Proclaimed	1984-05-22	Regulation

Comment #237: Authorization

The Regulation establishes conditions and requirements that radioactive facilities or ionizing radiation generation equipmentsand .... have to comply with regard to importing, exporting, distribution and sale of radioactive materials used or maintained at radioactive facilities or at ionizing radiation generation equipments and the reject of radioactive materials" it says:
: "
TITULO I
Disposiciones Generales
Artículo 1.- El presente reglamento establece las condiciones y requisitos que deben cumplir las instalaciones radiactivas o los equipos generadores de radiaciones ionizantes, el personal que se desempeñe en ellas u opere estos equipos, la importación, exportación, distribución y venta de las sustancias radiactivas que se utilicen o mantengan en las instalaciones radiactivas o en los equipos generadores de radiaciones ionizantes y el abandono o desecho de sustancias radiactivas. "

REGULATIONS / LAWS

Country: Chile, Republic of Reporting Year: 2005

Name	DFL 725	
Title or Name	Código sanitario (Health Officer Code)	
Reference Number	DFL Nº 725	
Date Promulgated or Proclaimed	1968-01-31	Regulation

Comment #248: Rad. materials

This Decret covers radioactive facilities in which radioactive materials are processed, treated, handeled, stored.

Name	Law 19.300	
Title or Name	Ley de bases del medioambiente. (Environmental Basic Law)	
Reference Number	Law Nº 19.300	
Date Promulgated or Proclaimed	1997-04-01	Law

Comment #249: Art.10ª

It defines the activities that can cause dammage to environmantal and lists waht are to be submitted to the environmental impact assessment. It mentions "production, storage, transport, disposal, or reuse of toxic, explosive, radioactive, flammable, corrosives substances.

Name	Dec.30	
Title or Name	Reglamento del Sistema de evaluación e impacto ambiental. (Reg. on Environmental assessment Impact)	
Reference Number	Dec. Nº 30	
Date Promulgated or Proclaimed	1997-04-03	Regulation

Name	NCS-DR-01	
Title or Name	Norma de Seguridad CCHEN : NCS-DR-01 Gestión de desechos radiactivos. (Radioactive waste management. CCHEN safety Standard.	
Reference Number	NCS-DR-01	
Date Promulgated or Proclaimed	1987-06-02	Regulation

MILESTONES

Country: Chile, Republic of | Reporting Year: 2005

Start Year or Reference Year:	1989	End Year	1989
Description of Milestone			
A Storage building (on surface) for conditioned radioactive waste is finished. It is a concrete and steal building, with internal structures to stand 200 l drums in an horizontal way.			

Start Year or Reference Year:	1990	End Year	1990
Description of Milestone			
The Radioactive Waste Management Unit is created under the Chilean Comission for Nuclear Energy organization, with the purpose of centralizing all activities related to radioactive waste management in the country.			

Start Year or Reference Year:	1992	End Year	1992
Description of Milestone			
A Radioactive Waste Treatment Plant is built and started up. Low and intermadiate activity waste are processed : spent sealed sources and solid waste. (volume reduction, immobilization in cements and conditioned).			

Start Year or Reference Year:	1996	End Year	1996
Description of Milestone			
A modification and enlargement of the Radioactive Waste Treatment Plant for the treatment of radioactive liquid waste is built.			

Start Year or Reference Year:	1997	End Year	1998
Description of Milestone			
Spent sealed sources, arised from radiotherapy in Chile, containing Radium 226 were conditioned according to "Radium Conditioning Project" supported by IAEA. The Chilean Team was composed by 2 professionals, 2 technicians and 1 superior welder, plus the IAEA's expert. A quantity of 2,5 Ci of Ra-226 (about 500 units) were conditioned in a retrievable way.			

Start Year or Reference Year:	1997	End Year	1997
Description of Milestone			
The Radioactive Waste Treatment Unit (capacity of facilities and personnel) is evaluated by IAEA, to serve as Demonstration Center for methodologies an procedures in the management of radioactive waste from nuclear applications. The first Demonstration Course for latin America and el Caribe Region is held in 1997. (4 courses are followed after that). The			

Start Year or Reference Year:	1999	End Year	1999
Description of Milestone			
A segregation and characterization laboratory for exempted waste is built annexed to the Storage Facility for Decay.			

Start Year or Reference Year:	2000	End Year	2000
Description of Milestone			
An ion exchange Plant (3 columns of ion exchange resin) to reduce liquid waste volume from nuclear research is installed and started up at Radioactive Waste Treatment Plant.			

Policies

Country: Chile, Republic of | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Partially
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	No
7	implemented controls over radioactive waste generation	Partially
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
9	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Incomplete
21	implement the licensing process	Complete
22	advise the government	Incomplete
	Waste Generator and Operators of Waste Management Facilities Responsibility	

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	No
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Chile, Republic of | **Disposal Facilities** | Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	No
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Policies

Country: Chile, Republic of **Processing/Storage** Reporting Year: 2005

111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

	Procedures	(Yes;No)
78	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)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

Policies

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

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

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

Country Waste Profile Report for

Croatia

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-04-27 09:19:47

Waste Class Matrix(ces) Used/Defined

Country: Croatia, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: National

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LILW-SL	100	0	0
LILW-LL	0	100	0
HLW	0	0	100

Description: A new national classification matrix derived from the classification schema defined by the new "Regulation on radioactive waste management" (draft)

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Croatia, Republic of — Reporting Year: 2005

Reporting Group: **IMI**

Inventory Reporting Date: December 2005

Waste Matrix Used: National

Description: Institute for Medical Research and Occupational Health (MI) is a national institute dedicated to occupational health. It was the first institution that started with activities related to radiation protection. As a product of those activities, there is a (now closed) storage of disused sealed sources. For more information see: www.imi.hr

Site Name	Facility Name	Facilities Defined		
IMI	SRM		storage	

Reporting Group: **IRB**

Inventory Reporting Date: December 2005

Waste Matrix Used: National

Description: Institute Rudjer Boskovic (IRB) is the largest Croatian research centre in sciences and science applications. It is a national institution dedicated to research, higher education, support to the academic community, state and local governments and technology-based industry. For more information see: www.irb.hr

Site Name	Facility Name	Facilities Defined		
IRB	TSRM		storage	

Reporting Group IMI, Site Structure: IMI

Country: Croatia, Republic of Reporting Year: 2005

Full Name: Institute for Medical Research and Occupational Health

License Holder(s) : not licensed, decommissioned

The following list the waste management facilities that are located at this site.

Facility: SRM

Description	Storage of Radioactive Material

Storage part of the "SRM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	No				
Capacity	The storage has been decommissioned.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRM	bunker	1959	Yes	No	No	Yes

Comment #9928: Storage Facility SRM

Closed interim storage of disused radioactive sources at the Institute for medical research and Occupational Health Zagreb, Ksaverska cesta 2 (IMI) had been used for 40 years until 2000. Storage is on the northern side behind the main Institute's building. The storage is adapted ex-atomic shelter built during 1950's consisting of several underground corridors and rooms.
IMI from 1959 render services in radiation protection. Until 1990 IMI was the only institution authorized to render this kind of services to all users in Croatia. These services also included consultancy related to and handing over of disused radioactive sources from the users when they asked for such service. Over the years many disused radioactive sources were transferred to IMI and placed into the IMI storage. The sources originate from lightning rods, smoke detectors, medical equipment and industrial gauges. The entrance is behind the main building. A locked metal door controls access. The reception desk located at the entrance of the IMI main building is permanently staffed and keys are kept there.

Before the remediation 2006, there was no intrusion detection, water was observed on the floor and there was no formal and accurate inventory. Radiation could be detected outside the closed door.

Within the timeframe June 06th to 30th 2006, Ekoteh Dosimetry Co. Radiation Protection, Zagreb, Vladimira Ruzdjaka 21, organised and performed works according to the "Plan and Program of Conditioning, Characterisation, Segregation and Packing in Lead Containers of Spent Radioactive Sources from the Temporary Storage Facility of the 'IMI', Zagreb, Ksaver 2", submitted on June 2nd 2006 to the SORP, as ordered by the IAEA according to the contract No. 2006-0469-150 from March 30th 2006.

Reporting Group IRB, Site Structure: IRB

Country: Croatia, Republic of Reporting Year: 2005

Full Name: Institute Rudjer Boskovic

License Holder(s) : Institute Rudjer Boskovic

The following list the waste management facilities that are located at this site.

Facility: TSRM

Description	Storage of Radioactive Material

Storage part of the "TSRM" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	Yes
Capacity	Capacity is about 20 years at the current rate of usage

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TSRM	building	1967	No	No	Yes	Yes

Reporting Group IRB, Site Data: IRB

Country: Croatia, Republic of Reporting Year: 2005

Full Name: Institute Rudjer Boskovic

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	4	0	0	0	0	0	0	100	No
LILW-LL	Storage	No	4	0	0	0	0	0	0	100	No

Spent Sources <=30 years in storage Waste data available, will not be reported

Spent Sources >30 years in storage Waste data available, will not be reported.

REGULATORS

Country: Croatia, Republic of

Reporting Year: 2005

Name	MH
Full Name	Ministry of Health and Social Welfare
Division	Sanitary Inspection Department
City or Town	ZAGREB

Name	SORP
Full Name	State Office for Radiation Protection
Division	
City or Town	Zagreb

REGULATIONS / LAWS

Country: Croatia, Republic of Reporting Year: 2005

Name	STRUCTURE	
Title or Name	Act on the Structure and Scope of Ministries and State Administration Organisations	
Reference Number	Off. Gazette 199/2003, 30/2004	
Date Promulgated or Proclaimed	2003-12-22	Law

Name	RAD. PROT.	
Title or Name	Act on Protection Against Ionising Radiation	
Reference Number	Off. gazette . 27/1999	
Date Promulgated or Proclaimed	1999-03-05	Law

Comment #12174: Regulation RAD. PROT.

Now replaced by the new ACT ON IONISING RADIATION PROTECTION AND SAFETY OF IONISING RADIATION SOURCES (Off. gazette . 64/2006). (See the attachment.)

Attachment #1227: ACT ON IONISING RADIATION PROTECTION AND SAFETY OF IONISING RADIATION SOURCES (Off. gazette . 64/2006)

File name: ACT-RPROT.pdf

File type: PDF Document

Name	WASTE M.	
Title or Name	Regulation on Procedures for Collecting, Accounting, Treatment, Final Disposal and Release of Radioactive Waste Materials into Human Environment	
Reference Number	Off. Gazette 62/1986	
Date Promulgated or Proclaimed	1986-07-18	Regulation

Comment #9699: Regulation WASTE M.

New regulation is in the process of promulgation (waiting government opinion).

Policies

Country: Croatia, Republic of | Reporting Year: 2005

National Systems

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

Comment #9929: Policies National Systems-Policy

Long-term radioactive waste management policy has not yet been developed.
For the waste accumulated in Croatia (few tens of cubic meters), the option of a new storage facility has been considered but not yet decided upon.
For the NPP Krško operational and decommissioning LILW, preliminary preparations were made for possible development of a Croatian near-surface repository several years ago. In the last few years, however, no further steps have been taken as it is expected that a joint solution with Slovenia will be negotiated.

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

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

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

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	(Complete;Incomplete)
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete

18	provide for adequate resources	Incomplete

Regulatory Body Responsibility

20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Partially
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Partially
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Partially
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Partially
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Partially

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

Policies

Country: Croatia, Republic of **Disposal Facilities** Reporting Year: 2005

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	No
41	Environmental Impact Statement (EIS)	No
42	Performance Assessment (PA)	No
43	Quality Assurance (QA)	No
44	Safety Assessment (SA)	No

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

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)

Does your country have written policies or written procedures for the following:

60	waste sorting/segregation	No
61	waste minimization	No
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

	Foreign	(Yes;No)

108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	No
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	Yes
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

	Procedures	(Yes;No)
78	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)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

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

Country Waste Profile Report for

Cuba

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:01:10

Waste Class Matrix(ces) Used/Defined

Country: Cuba, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #171: Waste Classification Scheme

The waste classification scheme defined in Cuban National Regulation (Regulation for the Safe Management of Radioactive Waste, Res 35/2003) is similar to the IAEA Def matrix. But there is not high level waste in Cuba.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Cuba, Republic of Reporting Year: 2005

Reporting Group: **CPHR**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Center for Radiation Protection and Hygiene

Site Name	Facility Name	Facilities Defined		
Repository	Repository			disposal
RWMF	WPF	processing		
	WSF		storage	

Comment #180: Reporting group

The Center for Radiation Protection and Hygiene (CPHR) is the institution responsible for radioactive waste management in Cuba

Reporting Group CPHR, Site Structure: Repository

Country: Cuba, Republic of Reporting Year: 2005

Full Name: Repository for final disposal of radioactive waste

License Holder(s) :

Comment #230: Repository

The repository was planned for the final disposal of low and intermediate level radioactive wastes from Juragua Nuclear Power Plant and nuclear applications. The construction of the NPP was stopped, as well as the studies regarding this repository.

The following list the waste management facilities that are located at this site.

Facility: Repository

Description	Repository for final disposal of radioactive wastes

Disposal part of the "Repository" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	Yes
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	12300
Depth (m)	15		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1990	1994
site selection		1994	1997

Reporting Group CPHR, Site Structure: RWMF

Country: Cuba, Republic of Reporting Year: 2005

Full Name: Radioactive Waste Management Facility

License Holder(s) : Center for Radiation Protection and Hygiene, Calle 20 No. 4113 Playa C. Habana

Comment #181: RWMF

Radioactive Waste Management Facility belongs to the Center for Radiation Protection and Hygine, which is the License Holder

The following list the waste management facilities that are located at this site.

Facility: WPF

Description	Waste Processing Facility, includes compaction of solid waste, immobilization by cementation of liquid waste and non compactible solids and conditioning of spent sealed sources.

Processing part of the "WPF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1999

Facility: WSF

Description	Waste storage facility, includes conditioning and non conditioning radioactive waste storage in an above ground construction. Disused sealed sources are also stored in this facility.

Storage part of the "WSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	Yes				
Capacity	Sufficient capacity for at least 10 years is available.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
RW Storage	silo	1990	No	No	No	Yes

Comment #7242: Storage facility

The Storage facility contains conditioning and non conditioning radioactive waste and disused sealed sources.

Reporting Group CPHR, Site Data: RWMF

Country: Cuba, Republic of | Reporting Year: 2005

Full Name: Radioactive Waste Management Facility

Inventory Reporting Date: December 2005 | Waste Matrix: 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

Class	Location / Form	Proc.	Volume (m3)	Distribution in % RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage Liquid	No	3.04	0	0	0	100	0	0	0	No
LILW-SL	Storage Solid	No	25	0	0	0	19	0	81	0	No
LILW-SL	Storage Solid	Yes	3	0	0	0	100	0	0	0	No
Comment #4899: The additional characteristics of the waste Unprocessed: solid (non-dispersible), solid (dispersible), liquid (aqueous), liquid (organic).											
LILW-LL	Storage Solid	No	3.6	0	0	0	56	0	44	0	No
LILW-LL	Storage Solid	Yes	0.2	0	0	0	0	0	100	0	No
Comment #4900: The additional characteristics of the waste Unprocessed: solid (non-dispersible), solid (dispersible), liquid (aqueous), liquid (organic).											

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

Method	Status: Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation	Yes			
Containerization			same	

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq): Group I less than or equal 4GBq num./activity	Group II more than 4GBq but less than or equal 4E+4GBq num./activity	Group III more than 4E+4GBq num./activity	cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
Sr-90	62 / 1.80E+00			No	Yes	5	1.80E+00	
Sr-90	87 / 3.38E+01	4 / 4.20E+02		Yes	No	5	4.54E+02	
Sr-90	34 / 3.15E+01			No	Yes	4	3.15E+01	
Sr-90	184 / 1.69E+02			Yes	No	4	1.69E+02	
Pb-210	3 / 1.96E-03			Yes	No	5	1.96E-03	
Kr-85	9 / 6.60E-01			No	Yes	5	6.60E-01	
Kr-85	5 / 2.96E-03			Yes	No	5	2.96E-03	
Kr-85	1 / 2.00E+00	1 / 1.48E+01		No	Yes	4	1.68E+01	

Reporting Group CPHR, Site Data: RWMF

Country: Cuba, Republic of Reporting Year: 2005

Kr-85	2			Yes	No	4	4.63E+00	
	4.63E+00							
Hg-203	2			Yes	No	5	1.48E-03	
	1.48E-03							
H-3	9			No	Yes	5	1.67E-03	
	1.67E-03							
H-3		18		Yes	No	5	1.20E+02	
		1.20E+02						
Eu-154	2			Yes	No	4	2.14E+00	
	2.14E+00							
Eu-152	2			Yes	No	5	4.40E-04	
	4.40E-04							
Cs-137	6			No	Yes	5	1.43E+00	
	1.43E+00							
Cs-137	99			Yes	No	5	1.56E+01	
	1.56E+01							
Cs-137	8	4		No	Yes	4	5.27E+01	
	1.43E+01	3.84E+01						
Cs-137	123	65		Yes	No	4	7.70E+02	
	2.24E+02	5.46E+02						
Cs-137	5			No	Yes	3	8.61E+00	
	8.61E+00							
Cs-137	17	404		Yes	No	3	5.81E+04	
	2.38E+01	5.81E+04						
Cs-137		17		No	Yes	2	3.48E+03	
		3.48E+03						
Cs-137		53		Yes	No	2	1.24E+04	
		1.24E+04						
Cs-137		5		Yes	No	1	5.55E+04	
		5.55E+04						
Co-60	39			No	Yes	5	8.00E-01	
	8.00E-01							
Co-60	49			Yes	No	5	2.47E+01	
	2.47E+01							
Co-60	8	1		No	Yes	4	2.74E+01	
	1.88E+01	8.60E+00						
Co-60	13			Yes	No	4	1.11E+01	
	1.11E+01							
Co-60		10		No	Yes	3	8.14E+02	
		8.14E+02						
Co-60	15	24		Yes	No	3	1.31E+03	
	4.99E+01	1.26E+03						
Co-60	9	3		No	Yes	2	3.41E+02	
	1.20E+01	3.29E+02						
Co-60		41		Yes	No	2	2.60E+02	
		2.60E+02						
Co-60		6	14	No	Yes	1	3.91E+06	
		2.10E+05	3.70E+06					
Co-60			4	Yes	No	1	1.25E+06	
			1.25E+06					
Cf-252 Neutron Gen.	6			No	Yes	5	6.20E-01	
	6.20E-01							

Reporting Group CPHR, Site Data: RWMF

Country: Cuba, Republic of Reporting Year: 2005

Ba-133	6			Yes	No	5	1.52E-02	
	1.52E-02							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	34		No	Yes	5	8.80E-01	
	8.80E-01						
Ra-226	1027		No	Yes	4	1.78E+02	
	1.78E+02						
Pu-239 Neutron Gen.		5	No	Yes	3	1.34E+03	
		1.34E+03					
Pu-239	33		No	Yes	5	1.85E-02	
	1.85E-02						
Pu-238	2		No	Yes	4	2.40E+00	
	2.40E+00						
Pu-238 Neutron Gen.	1	4	No	Yes	3	7.21E+02	
	1.20E+00	7.20E+02					
Pu-238	12		No	Yes	5	8.51E+00	
	8.51E+00						
Pu-238	7		No	Yes	4	7.12E+00	
	7.12E+00						
Ni-63	4		Yes	No	5	1.55E+00	
	1.55E+00						
I-129	1		Yes	No	5	3.70E-06	
	3.70E-06						
C-14	11		No	Yes	5	8.40E-04	
	8.40E-04						
Am-241 Neutron Gen.	6	1	No	Yes	4	1.20E+01	
	8.29E+00	3.70E+00					
Am-241 Neutron Gen.	1	19	No	Yes	3	1.69E+03	
	1.11E+00	1.69E+03					
Am-241	9754	1	No	Yes	5	9.52E+00	
	2.12E+00	7.40E+00					
Am-241	8279		Yes	No	5	1.66E+01	
	1.66E+01						
Am-241	4	9	Yes	No	4	5.03E+01	
	7.40E+00	4.29E+01					
Am-241	6		Yes	No	3	4.06E+00	
	4.06E+00						

Multiple Nuclides Spent Sources in storage

Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
Am-241	1.000E-04	No	Yes	5	
Sr-90	1.000E-04				

REGULATORS

Country: Cuba, Republic of Reporting Year: 2005

Name	CNSN
Full Name	National Center for Nuclear Safety
Division	
City or Town	Havana

Comment #7240: Establishment of Regulatory Authority

The Decree-Law 207:”On the use of nuclear energy” establishes, in the article 4 that the Minister of Science Technology and the Environment (CITMA) is responsible for supervising, implementing and controlling the Government policy regarding the use of nuclear energy. The regulation and control for the safe use of nuclear energy and for the control of nuclear materials is implemented through the National Center for Nuclear Safety (CNSN).

REGULATIONS / LAWS

Country: Cuba, Republic of Reporting Year: 2005

Name	DL-207	
Title or Name	On the Use of Nuclear Energy	
Reference Number	Decree - Law 207	
Date Promulgated or Proclaimed	2000-02-17	Law

Comment #289: Decree Law 207 and HLW

Although there is not HLW at present in Cuba, the Decree Law 207 includes spent fuel.

Name	Res-121	
Title or Name	Regulation for the Safe Transport of Radioactive Materials	
Reference Number	Resolution 121/2000 CITMA	
Date Promulgated or Proclaimed	2000-12-15	Regulation

Name	Res-25	
Title or Name	Regulation for the Authorization of Practices Associated with the Use of Ionizing Radiation	
Reference Number	Resolution 25/98	
Date Promulgated or Proclaimed	1998-07-06	Regulation

Name	Law 81	
Title or Name	Law 81 on the Environment	
Reference Number	Law 81	
Date Promulgated or Proclaimed	1997-07-11	Law

Name	Res-35	
Title or Name	Regulation for the safe management of radioactive waste	
Reference Number	Resolution 35 / 2003 CITMA	
Date Promulgated or Proclaimed	2003-03-10	Regulation

REGULATIONS / LAWS

Country: Cuba, Republic of Reporting Year: 2005

Name	Cuban BSS	
Title or Name	Cuban Basic Safety Standards	
Reference Number	Join Resolution CITMA MINSAP	
Date Promulgated or Proclaimed	2002-01-04	Regulation

Name	Guide01/04	
Title or Name	Unconditional Clearance Levels for solid materials with low radioactive content and for liquid and gas discharges to the environment	
Reference Number	Resolution 01/2004 CNSN	
Date Promulgated or Proclaimed	2004-01-09	Regulation

Comment #9778: Regulation Guide01/04

This is a guidance document that supports the Regulation for Radioactive Waste Management (Resolution 35/2003). The criteria for unconditional clearance, as well as unconditional clearance levels are contained in this guide, as they are not included in the regulation

Name	Guide02/04	
Title or Name	Guidance for the implementation of the Regulation for the Safe Transport of Radioactive Materials	
Reference Number	Resolucion 2/2004 CNSN	
Date Promulgated or Proclaimed	2004-01-15	Regulation

Name	Personnel	
Title or Name	Regulation for selection, training and authorization of personnel executing practices associated with the use of ionizing radiation	
Reference Number	Joint Resolution CITMA MINSAP	
Date Promulgated or Proclaimed	2004-03-24	Regulation

Name	Res-58	
Title or Name	Prohibition on the importation of and other regulations for the use of lighting rods	
Reference Number	Resolution 58/2003 CITMA	
Date Promulgated or Proclaimed	2003-07-22	Regulation

REGULATIONS / LAWS

Country: Cuba, Republic of Reporting Year: 2005

Name	Res-96	
Title or Name	Regulation for the import, distribution, assembly and use of smoke detectors	
Reference Number	Resolution 96/2003 CITMA	
Date Promulgated or Proclaimed	2004-02-16	Regulation

MILESTONES

Country: Cuba, Republic of

Reporting Year: 2005

Start Year or Reference Year:	1985	End Year	
Description of Milestone			
First conditioning activities were carried out in the country. Solid and liquid radioactive waste generated in research activities were immobilized.			

Start Year or Reference Year:	1986	End Year	2004
Description of Milestone			
A facility in the Oncology Hospital, contaminated with Cs-137 was decommissioned. It was a former brachytherapy facility that was used as storage facility for disused sealed sources at the beginning of eighties.			

Start Year or Reference Year:	1988	End Year	1991
Description of Milestone			
The construction of the Waste Processing and Storage Facility (WPSF). The WPSF was put into operation in 1988 and the centralized collection of radioactive waste was implemented around the country. The first two collections of disused sealed radioactive sources were carried out in 1988 and 1991.			

Start Year or Reference Year:	1995	End Year	1997
Description of Milestone			
A National Technical Cooperation Project was developed with the IAEA. The necessary equipment for waste characterization, radiation protection and for quality and process control at the Waste Treatment and Storage Facility was supplied under this project. A number of personal were trained as part of this TC Project.			

Start Year or Reference Year:	1996	End Year	1997
Description of Milestone			
Chemical and radiological characterization of centralized, stored low-level liquid waste.			

Start Year or Reference Year:	1996	End Year	1997
Description of Milestone			
Radiological characterization of unknown disused sealed sources			

Start Year or Reference Year:	1997	End Year	2002
Description of Milestone			
Establisment of a Quality Management System (QMS) for the radioactive waste management service, including all the stages: from collection of waste until storage as conditioned packages. The QMS was internally certified in the Center for Radiation Protection and Hygiene, according to the ISO 9001 Standard			

Start Year or Reference Year:	1999	End Year	
Description of Milestone			
The Waste Processing Facility was put into operaction. The facility is now licensed for compaction of solid waste, conditioning of disused sealed sources (except Ra-226) and storage of radioactive waste and disused sealed sources.			

Start Year or Reference Year:	1999	End Year	2000
Description of Milestone			
Decommissioning of a brachytherapy facility at the Oncology Hospital in Havana. This facility used Ra-226 sources for the brachytherapy service.			

Start Year or Reference Year:	1999	End Year	2001
Description of Milestone			
The safety analysis of the present Storage Facility was carried out in order to evaluate the possibility to use it as long term storage.			

MILESTONES

Country: Cuba, Republic of

Reporting Year: 2005

Start Year or Reference Year:	1999	End Year	2001
Description of Milestone			
Establishment of requirements and methods for low and intermediate level waste package acceptability in the storage facility.			

Start Year or Reference Year:	1999	End Year	2000
Description of Milestone			
Development of the acceptance requirements for the wastes that will be collected from the users. Wastes are segregated at the point of origin in accordance with established classification.			

Start Year or Reference Year:	2002	End Year	2004
Description of Milestone			
The Regulation for the Safe Management of Radioactive Waste was developed and implemented in March 2003. The Guide "Unconditional Clearance Levels for solid materials with low radioactive content and for liquid and gas discharges to the environment" implemented in 2004			

Start Year or Reference Year:	2005	End Year	
Description of Milestone			
A radiochemical laboratory at the International Center for Neurological Restoration (CIREN) was decommissioned. This laboratory used 14C for radiochemical basic research, but this practice concluded and the institution requested the release of this facility from regulatory control. Decommissioning services were provided by the CPHR.			

Start Year or Reference Year:	2005	End Year	2006
Description of Milestone			
A National Technical Cooperation Project is developed with the IAEA. The objective is to improve waste management activities in the country, mainly at generator institutions.			

Policies

Country: Cuba, Republic of Reporting Year: 2005

National Systems

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

Comment #233: Policy

The national policy for radioactive waste management is developed in accordance with the objective and principles established in the IAEA Safety Series No. 111-S-1.
There exist in the country the adequate capabilities for the safe management of radioactive waste:
The National Center for Nuclear Safety (The Regulatory Body) is responsible for the licensing and supervision of radioactive and nuclear installations and for the control of generated radioactive waste.
There is a Waste Processing and Storage Facility adequate to the amount and types of radioactive waste generated in the country.
The required regulatory infrastructure was created (including Laws and Regulations) for the control of radioactive waste.
The Center for Radiation Protection and Hygiene is responsible for centralized collection, transportation, treatment, conditioning and long term storage of radioactive waste, as well as for developing new waste conditioning and containment methods

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

Comment #234: Strategies

Radioactive waste management is one of the topics in the strategy of the Minister of Science Technology and Environment for the next five year. New research programmes will be developed with the aims of improving operational and regulatory capabilities for dealing with radioactive waste.

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

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

Comment #235: Interdependencies

The existing facility for radioactive waste management is adequate for the amount and types of generated radioactive waste. The wastes are segregated in the point of origin according to their characteristics and existing methods for treatment and conditioning.

Comment #236: Resources

Final disposal of radioactive wastes is financed by the Government (who will centralized a budget provided by the licensed institutions), meanwhile the other steps of radioactive waste management are financed by the waste generators and the Center for Radiation Protection and Hygiene. Research programmes and regulatory activities are financed by the Minister of Science, Technology and Environment. The Government, through the Minister of Education, is responsible for guarantying the personal capabilities.

	Responsibilities	(Complete;Incomplete)
Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.		
Member State Responsibility		
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes

36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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

If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below

Attachment #1212: The Safety Guide 01/2004 of the Regulatory Authority establishes the unconditional clearance levels for solid materials with very low activity content and for release of liquids and gases to the environment

File name: Guiadesechos.pdf

File type: PDF Document

Member State's Reference # Guide 01/2004 CNSN

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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 #239: Disposal facility - Policy

Although there is not in operation any disposal facility in the country, these topics are included in environmental regulations and radiological safety regulations that apply to the management of radioactive wastes.

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

Comment #240: Waste Acceptance Criteria

There is not any disposal facility for radioactive waste in operation in the country.
Nevertheless the Waste Acceptance Criteria, Waste Package Specifications and Control Methods are defined for the operating storage facility.

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Comment #241: Procedures

The centralized Waste Processing and Storage Facility has implemented a Quality Assurance programme including all these operations. A Safety Guide was issued for generators, explaining the way they have to manage radioactive wastes.
There is not nuclear fuel cycle waste in the country.

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

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

Spent SRS

Policies

Country: Cuba, Republic of **Spent SRS** Reporting Year: 2005

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	Yes
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

	Procedures	(Yes;No)
78	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 #242: Spent SRS

The Regulation for the Safety of Radioactive Waste Management establishes in the Article 59: “The Licensee who imports a sealed radioactive source shall take the reasonable measures to return the source to the supplier once it has been declared disused. For this purpose, an agreement shall be signed between the Licensee and the Supplier. Should this not be the case, the disused sealed source shall be transferred to a waste management facility.

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

Comment #243: Return the SRS

The agreements for returning the spent sealed radiation sources to their supliers do not cover all the SRS that are in use at present.

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

Import-Export

	Radioactive Waste	(Yes;No)

91 Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)? — Yes

Comment #244: Import of RadWaste

The Law 81, On the Environment, defined that the import of radioactive wastes required the authorization of the Minister of Science, Technology and Environment. The export is not covered in the Law.

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

Comment #245: Decommission

Decommissioning activities in the country are financed by the Government and the institutions where the decommissioning is carried out.

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

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

Comment #7241: Time frame for decommissioning

Decommissioning activities performed up to now in the country have shown that the decommissioning of radioactive facilities could not be carried out inmediately after shutdown because the necessary resources were not available.

Country Waste Profile Report for
Czech Republic
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-04-12 10:26:41

Waste Class Matrix(ces) Used/Defined

Country: Czech Republic Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Waste Class Matrix: cz-eu

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
TRW	100	0	0
LILW-SL	100	0	0
LILW-LL	0	100	0
HLW	0	0	100

Description: TRW - >Temporary waste, whose activity after 5 years storage does not exceed the clearance levels.
LILW-SL > Low and intermediate-level waste-short-lived contains radionuclides with half-life shorter than 30 years and with a maximal mass activity of long-lived alpha emitters of 4 kBq/g
LILW-LL -> Low and intermediate-level waste long-lived exceeds limits for LILW-SL
HLW-> High-level waste waste for which heat generation from radionuclide decay must be taken into account

Comment #7186: Waste classification

Solid radioactive waste shall be classified into three basic categories, namely temporary, low-level and intermediate-level, and high-level wastes.

Temporary radioactive waste shall be such waste whose radioactivity after long-term storage (maximum 5 years) does not exceed the clearance levels.

High-level radioactive waste shall be waste for which heat generation from radionuclide decay of the radionuclides contained must be taken into account during its storage and disposal.

Other radioactive waste shall be classified as low and intermediate-level waste. Low and intermediate-level waste is classified into two subcategories. The first subcategory is short-lived waste, in which the half-life of radionuclides contained is shorter than 30 years (including Cs-137) with a limited mass activity of long-lived alpha emitters (in individual packages a maximum of 4000 kBq/kg, and a mean value of 400 kBq/kg in the total volume of waste produced in a calendar year). The other subcategory is long-lived waste, that is waste not ranking in the short-lived radioactive waste subcategory.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Czech Republic Reporting Year: 2005

Reporting Group: **Institut**

Inventory Reporting Date: December 2005

Waste Matrix Used: cz-eu

Description: Research institutes, radiochemical laboratories, industrial facilities etc.

Site Name	Facility Name	Facilities Defined		
ISOTREND	N	processing		
UJV	VZ	processing		
	Cerv.Skala		storage	
	Prekladist		storage	
	VAO		storage	
Zamservis	SRS	processing		

Reporting Group: **NPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: cz-eu

Description: Nuclear power plants

Site Name	Facility Name	Facilities Defined		
EDU	SVO	processing		
	ZRAO	processing		
	BAPP	processing	storage	
ETE	BPP	processing	storage	

Groups Overview

Country: Czech Republic Reporting Year: 2005

Reporting Group: **SURAO**

Inventory Reporting Date: December 2005

Waste Matrix Used: cz-eu

Description: Radioactive Waste Repository Authority

Site Name	Facility Name	Facilities Defined		
Bratrstvi	URAO			disposal
Dukovany	URAO			disposal
Hostim	URAO			disposal
Richard	URAO		storage	disposal

Comment #359: Status and activities of SURAO

To provide for activities associated with radioactive waste disposal, the Ministry of Industry and Trade set up a Radioactive Waste Repositories Authority (hereinafter referred to as "SURAO") as a State organisation. The Authority shall carry out particular activities in radioactive waste management based on a licence under Atomic Act (Act No. 18/1997).

The SURAO shall engage in the following activities

a) preparation, construction, commissioning, operation and closure of radioactive waste repositories and monitoring of their impact on the environment;

b) radioactive waste management;

c) conditioning of spent or irradiated nuclear fuel into a form suitable for its disposal or further utilisation;

d) keeping records of radioactive waste receipts and their generators;

e) administration of payments to the nuclear account;

f) drafting of proposals for determination of payments to the nuclear account;

g) provision for and co-ordination of research and development in the field of radioactive waste management;

h) monitoring of reserves of licensees for decommissioning of their installations;

i) provision of services in the field of radioactive waste management;

j) management of radioactive waste transported to the territory of the Czech Republic from abroad when it is not possible to return it;

k) provision of temporary administration in the case of radioactive waste that, under a specific Act, has become State property; if these are items that were found, left or hidden, the Authority is entitled also to accept them, instead of a State body determined by a specific Act.

Reporting Group Institut, Site Structure: ISOTREND

Country: Czech Republic Reporting Year: 2005

Full Name: ISOTREND s.r.o.

License Holder(s) : ISOTREND s.r.o.
Radiová 1
CZ-102 27 PRAHA 10

Comment #395: Activity

Assembly, checks, maintenance and distribution of radionuclide sources, predisposal operation in radioactive waste management

The following list the waste management facilities that are located at this site.

Facility: N

Description	Waste treatment and conditioning facility

Processing part of the "N" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Unknown

Reporting Group Institut, Site Structure: UJV

Country: Czech Republic Reporting Year: 2005

Full Name: UJV Rez a.s.
(Nuclear Research Institute Rez)

License Holder(s) : UJV Rez a.s.
CZ-250 68 Rez

The following list the waste management facilities that are located at this site.

Facility: VZ

Description	Velke Zbytky: Waste treatment and conditioning plant

Processing part of the "VZ" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1962

Facility: Cerv.Skala

Description	Cervena Skala (Red Rock): Waste storage facility

Storage part of the "Cerv.Skala" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Cerv.Skala	container (ISO)	1988	No	Yes	No	No
Cerv.Skala	concrete pad	1988	No	No	No	No

Reporting Group Institut, Site Structure: UJV

Country: Czech Republic Reporting Year: 2005

Facility: Prekladist

Description	Prekladiste: Waste storage facility

Storage part of the "Prekladist" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
prekladist	bunker	1963	No	No	No	No

Facility: VAO

Description	Sklad VAO (HLW store) - facility for storage of spent fuel and LILW with activity exceeding WAC for operating repositories

Storage part of the "VAO" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
N	building	1995	No	No	No	No

Reporting Group Institut, Site Structure: Zamservis

Country: Czech Republic Reporting Year: 2005

Full Name: Zamservis s.r.o.

License Holder(s) : Zamservis s.r.o.
Lipová 24
CZ-747 16 Hat

The following list the waste management facilities that are located at this site.

Facility: SRS

Description	

Processing part of the "SRS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1997

Reporting Group NPP, Site Structure: EDU

Country: Czech Republic Reporting Year: 2005

Full Name: Nuclear Power Plant Dukovany

License Holder(s) : CEZ a.s

Comment #391: NPP Dukovany

4 PWR of VVER-440-V213 type are installed. Total electrical output is 1760 MW. Physical startup of the 1 unit was in february 1985. Full commercial operation of all units started in January 1988.
NPP is situated 35 km to the SW of the City of Brno.

The following list the waste management facilities that are located at this site.

Facility: SVO

Description	Liquid Waste Treatment Systems

Processing part of the "SVO" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1985

Facility: ZRAO

Description	Conditioning of Liquid Radioactive Waste by Solidification

Processing part of the "ZRAO" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1994

Reporting Group NPP, Site Structure: EDU

Country: Czech Republic Reporting Year: 2005

Facility: BAPP

Description	Auxiliary building containing waste processing and storage facilities

Processing part of the "BAPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1985

Storage part of the "BAPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TW	tank (stainless steel)	1985	No	No	No	No
Box	bunker	1985	No	No	No	No
Mog	well	1985	No	No	No	No

Reporting Group NPP, Site Data: EDU

Country: Czech Republic Reporting Year: 2005

Full Name: Nuclear Power Plant Dukovany

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage BAPP	No	306	100	0	0	0	0	0	0	No
LILW-SL	Storage BAPP	Yes	2301	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Evaporation			same	
Ion Exchange			same	
Solvent Extraction			increase	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			same	
Polymerization	Yes			

Reporting Group NPP, Site Structure: ETE

Country: Czech Republic Reporting Year: 2005

Full Name: Nuclear Power Plant Temelin

License Holder(s) : CEZ a.s.

Comment #390: NPP Temelin

The Temelín NPP is the largest power station in the Czech Republic. 2 PWR reactors of the VVER-1000-320 type are installed with capacity of 2000 MW.
The NPP station is situated approximately 24 km north of the City of Ceske Budejovice.
The site preparation started in 1983. In 1990, the government of the CSFR decided to cease the construction on the 3rd and 4th units. Finally, in March 1993, the government of the CR decided that the 1st and 2nd VVER 1000 units should be completed only. However, the modifications and alterations further postponed the commissioning of the power station. Unit 1 was critical in October 2000. The trial operation of the Unit 1 started in July 2002. The Unit 2 was critical in May 2002. The trial operation of the Unit 2 started in April 2003.

The following list the waste management facilities that are located at this site.

Facility: BPP

Description	Waste processing and interim storage facility

Processing part of the "BPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2000

Storage part of the "BPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
box	bunker	2000	No	No	No	No
kobka	well	2000	No	No	No	No

Reporting Group NPP, Site Data: ETE

Country: Czech Republic Reporting Year: 2005

Full Name: Nuclear Power Plant Temelin

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			increase	
Evaporation			increase	
Ion Exchange			increase	

Processing - Conditioning method(s)

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

Reporting Group SURAO, Site Structure: Bratrstvi

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Bratrstvi

License Holder(s) : SURAO (Radioactive Waste Repository Authority)

Comment #388: Information

The Bratrstvi facility was built in an abandoned uranium mine near Jachymov (Joachimsthal). It is used for waste containing natural radionuclides (Ra-226, Pb-210, Uranium and Thorium isotopes).

The following list the waste management facilities that are located at this site.

Facility: URAO

Description	Radioactive waste repository

Disposal part of the "URAO" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	No	No
LILW-LL	Yes	Yes	HLW	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	rock cavern (mountain/hill)		
Facility is non modular			
Capacity - existing (m3)	1200	Capacity -planned (m3)	1200
Depth (m)	30-60		
Host medium	crystalline rock (gneiss)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1970	
site selection			1971
design		1971	
construction		1972	1973
commissioning		1974	
operation		1974	2030
closure		2030	

Comment #7197: Total volume of repository

The volume of the facility is about 3500 m3 including transport corridors. Reviews of historical records and documents were done during 1999-2003.

Comment #9798: Calculation of used repository capacity

From the total volume of 3500 m3 of only 1200 m3 can be used for disposal of RAW. At the end of 2004 about 880 m3 of RAW (73.3% from available disposal volume) were disposed.

Reporting Group SURAO, Site Data: Bratrstvi

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Bratrstvi

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-LL	Disposal	Yes	267.2	0	0	0	100	0	0	0	No

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Pb-210	7			Yes	No	0	8.46E-01	2005.12 (estimate)
	8.46E-01							

Spent Sources >30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	131	43	Yes	No	0	4.17E+02	2005.12 (estimate)
	3.71E+01	3.80E+02					

Reporting Group SURAO, Site Structure: Dukovany

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Dukovany

License Holder(s) : SURAO (Radioactive Waste Repository Authority)

Comment #381: Information

The Dukovany repository (URAO) serves for radioactive waste from operation of Czech NPP. It does not accept waste from research, industry and medicine or spent sealed sources. The accepted waste corresponds to the IAEA LLW-SL waste class.

The following list the waste management facilities that are located at this site.

Facility: URAO

Description	Near-surface radioactive waste repository for disposal of operational waste from both NPPs and waste from their decommissioning, also other RAW can be disposed not exceeding 5% of the total limit of radionuclide inventory (for C-14 only 1%)

Disposal part of the "URAO" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	55000	Capacity -planned (m3)	55000
Depth (m)	5.3		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1976	
site selection			1982
design			1986
construction		1987	
commissioning			1994
operation		1995	
closure	Yes	2100	

Comment #9797: Calculation of used repository capacity

The reported % of existing capacity used is based on the number of vaults filled by RAW in 200 l drums, which was at the end of 2004 about 9,5 vaults (about 8,5% of the volume of the whole repository - 112 vaults).

Reporting Group SURAO, Site Data: Dukovany

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Dukovany

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	No	73.4	100	0	0	0	0	0	0	No
LILW-SL	Disposal	Yes	3262.4	100	0	0	0	0	0	0	Yes

Reporting Group SURAO, Site Structure: Hostim

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Hostim

License Holder(s) : SURAO (Radioactive Waste Repository Authority)

Comment #389: Information

The repository was situated near the City of Beroun. It was constructed in an abandoned limestone mine and put into operation in 1959 for radioactive waste from research, industry and medicine. It was closed in 1965 and most of waste packages were transferred in the Richard repository. The repository was finally filled with concrete and sealed in 1997. The site is monitored.

The following list the waste management facilities that are located at this site.

Facility: URAO

Description	Closed Radioactive Waste Repository

Disposal part of the "URAO" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	Yes	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	rock cavern (mountain/hill)		
Facility is non modular			
Capacity - existing (m3)	1690	Capacity -planned (m3)	not specified
Depth (m)	30		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1959	
commissioning			1959
operation		1959	1964
closure		1965	1997
institutional control		1998	

Reporting Group SURAO, Site Data: Hostim

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Hostim

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRW	Disposal	Yes	330	0	0	0	100	0	0	0	No

Reporting Group SURAO, Site Structure: Richard

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Richard

License Holder(s) : SURAO (Radioactive Waste Repository Authority)

Comment #380: Information

Abandoned mine Richard (60 km N of Prague) serves as repository for radioactive waste from research, industry and medicine. Basic waste acceptance requirements are a dose rate at 5 cm distance from the surface of the waste package less then 1 mSv/h. The accepted waste corresponds to the IAEA LLW waste class.

The following list the waste management facilities that are located at this site.

Facility: URAO

Description	Radioactive waste repository

Storage part of the "URAO" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	Yes	Yes	HLW	No	No
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
komora	cave	1964	No	No	No	Yes

Disposal part of the "URAO" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
TRW	No	No	LILW-SL	Yes	Yes
LILW-LL	No	No	HLW	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	rock cavern (mountain/hill)		
Facility is non modular			
Capacity - existing (m3)	8300	Capacity -planned (m3)	8300
Depth (m)	30-60		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1961	
site selection			1961
design		1961	
construction			1962
commissioning		1964	
operation		1964	2070
closure		2070	

Comment #9799: Calculation of used repository capacity

From the total volume of 17 050 m3 of only 8300 m3 can be used for disposal of RAW. At the end of 2004 about 6260 m3 of RAW (75.4% from available disposal volume) were disposed.

Reporting Group SURAO, Site Data: Richard

Country: Czech Republic Reporting Year: 2005

Full Name: Radioactive Waste Repository Richard

Inventory Reporting Date: December 2005 Waste Matrix: cz-eu

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	5	0	0	0	100	0	0	0	Yes
LILW-SL	Storage	Yes	0.2	0	0	0	100	0	0	0	No
LILW-SL	Disposal	No	23.77	0	0	0	100	0	0	0	Yes
LILW-SL	Disposal	Yes	2128.84	0	0	0	100	0	0	0	Yes
LILW-LL	Storage	No	2.8	17.56	0	0	82.44	0	0	0	Yes
LILW-LL	Storage	Yes	1.6	0	0	0	100	0	0	0	Yes

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Pm-147	1			Yes	No	0	1.03E-04	2005.12 (estimate)
	1.03E-04							
Cs-137	22	13		Yes	No	0	2.39E+05	2005.12 (estimate)
	1.45E+01	2.39E+05						
Co-60		18		Yes	No	0	3.72E+05	2005.12 (estimate)
		3.72E+05						
Cf-252	1			Yes	No	0	2.60E-03	2005.12 (estimate)
	2.60E-03							

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-89				Yes	No	0	0.00E+00	2005.12
Y-88				Yes	No	0	0.00E+00	2005.12
Se-75	16			Yes	No	0	1.20E-01	2005.12
	1.20E-01							
Mn-54	1			Yes	No	0	2.14E-07	2005.12
	2.14E-07							
Pb-210	1			Yes	No	0	1.09E-04	2005.12
	1.09E-04							
Tm-170				Yes	No	0	0.00E+00	2005.12
Eu-152	2			Yes	No	0	2.35E-04	2005.12
	2.35E-04							
Cs-134	1			Yes	No	0	2.06E-04	2005.12
	2.06E-04							
Cd-109	14			Yes	No	0	6.84E+00	2005.12
	6.84E+00							

Reporting Group SURAO, Site Data: Richard

Country: Czech Republic Reporting Year: 2005

Ru-106	3			Yes	No	0	6.23E-03	2005.12
	6.23E-03							
Co-57	15			Yes	No	0	3.92E-02	2005.12 (estimate)
	3.92E-02							
Na-22	2			Yes	No	0	1.03E-05	2005.12 (estimate)
	1.03E-05							
Ba-133	7			Yes	No	0	1.77E-04	2005.12 (estimate)
	1.77E-04							
Ce-144	2			Yes	No	0	7.43E-04	2005.12 (estimate)
	7.43E-04							
Sr-90	276	31		Yes	No	0	2.74E+03	2005.12 (estimate)
	1.61E+02	2.58E+03						
Zn-65	1			Yes	No	0	6.30E-04	2005.12 (estimate)
	6.30E-04							
Tl-204	4			Yes	No	0	8.25E-02	2005.12 (estimate)
	8.25E-02							
Pm-147	26			Yes	No	0	5.80E+01	2005.12 (estimate)
	5.80E+01							
Kr-85	79	33		Yes	No	0	1.49E+03	2005.12 (estimate)
	1.30E+02	1.36E+03						
H-3	3	7		Yes	No	0	4.14E+03	2005.12 (estimate)
	9.38E-01	4.14E+03						
Fe-55	19			Yes	No	0	3.08E+00	2005.12 (estimate)
	3.08E+00							
Cs-137	187	147	1	Yes	No	0	4.10E+05	2005.12 (estimate)
	9.71E+01	3.53E+05	5.70E+04					
Co-60	948	181	1	Yes	No	0	9.63E+05	2005.12 (estimate)
	2.43E+02	9.04E+05	5.90E+04					
Cf-252	14	1		Yes	No	0	1.13E+01	2005.12 (estimate)
	6.05E-01	1.07E+01						
Ce-144				Yes	No	0	0.00E+00	2005.12 (estimate)

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ni-63	1		Yes	No	0	3.21E-01	2005.12
	3.21E-01						
K-40	2		Yes	No	0	6.92E-07	2005.12
	6.92E-07						
C-14	1		Yes	No	0	2.00E-04	2005.12
	2.00E-04						
U-238	2		Yes	No	0	9.54E-01	2005.12 (estimate)
	9.54E-01						
Ra-226	1		Yes	No	0	3.66E-01	2005.12 (estimate)
	3.66E-01						
Pu-239		38	Yes	No	0	2.43E+03	2005.12 (estimate)
		2.43E+03					

Reporting Group SURAO, Site Data: Richard

Country: Czech Republic Reporting Year: 2005

Pu-238	4	2	Yes	No	0	1.11E+02	2005.12 (estimate)
	2.50E+00	1.08E+02					
Am-241	194	51	Yes	No	0	4.28E+03	2005.12 (estimate)
	3.63E+01	4.24E+03					

Spent Sources >30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Pu-239	17	25	Yes	No	0	1.21E+03	2005.12 (estimate)
	6.20E+00	1.20E+03					
Am-241	107	66	Yes	No	0	7.54E+03	2005.12 (estimate)
	6.78E+01	7.48E+03					
C-14	12	2	Yes	No	0	1.43E+01	2005.12 (estimate)
	3.31E+00	1.10E+01					

REGULATORS

Country: Czech Republic Reporting Year: 2005

Name	SUJB
Full Name	State Office for Nuclear Safety
Division	Division of Radioactive Waste and Spent Fuel Management
City or Town	Prague

REGULATIONS / LAWS

Country: Czech Republic Reporting Year: 2005

Name	Atomic Act	
Title or Name	Act on Peaceful Use of Nuclear Energy and Ionizing radiation	
Reference Number	18/1997	
Date Promulgated or Proclaimed	1997-01-24	Law

Name	307	
Title or Name	Decree of the State Office for Nuclear Safety on Radiation Protection	
Reference Number	307/2002	
Date Promulgated or Proclaimed	2002-06-13	Regulation

Name	317	
Title or Name	Decree Of the State Office for Nuclear Safety , on Type Approval of Packaging Assemblies for Transport, Storage and Disposal of Nuclear Materials and Radioactive Substances, on Type Approval of Ionizing Radiation Sources and on Transport of Nuclear Materials and Specified Radioactive Substances	
Reference Number	317/2002	
Date Promulgated or Proclaimed	2002-06-13	Regulation

Name	145	
Title or Name	Decree of the State Office for Nuclear Safety, on Accounting for and Control of Nuclear Materials and their Detailed Specification	
Reference Number	145/1997	
Date Promulgated or Proclaimed	1997-06-19	Regulation

Name	214	
Title or Name	Decree of the State Office for Nuclear Safety, on Quality Assurance in Activities Related to the Utilization of Nuclear Energy and in Radiation Activities, and Laying Down Criteria for the Assignment and Categorization of Classified Equipment into Safety Classes	
Reference Number	214/1997	
Date Promulgated or Proclaimed	1997-08-15	Regulation

REGULATIONS / LAWS

Country: Czech Republic Reporting Year: 2005

Name	318	
Title or Name	Decree of the State Office for Nuclear Safety, on Details of Emergency Preparedness of Nuclear Facilities and Workplaces with Ionising Radiation Sources and on Requirements on the Content of On-Site Emergency Plan and Emergency Rule	
Reference Number	318/2002	
Date Promulgated or Proclaimed	2002-06-13	Regulation

Name	185	
Title or Name	Decree of the State Office for Nuclear Safety on Decommissioning of Nuclear Facilities or Workplaces of IIIth or IVth Category	
Reference Number	185/2003	
Date Promulgated or Proclaimed	2003-06-03	Regulation

Country Waste Profile Report for

Ecuador

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:02:15

Waste Class Matrix(ces) Used/Defined

Country: Ecuador, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: A

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
IND. + HOSPITAL WASTES	38	62	0

Description: "Information about the "A" matrix"
The Ecuadorian law does not consider radioactive wastes by classes. It is an old law (released 1978) and therefore wastes are regulated in a general manner. Our law literally states : "The licensee must do every existent operation to treat and to evacuate radioactive wastes".

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	X			
processed		X	X	X

Groups Overview

Country: Ecuador, Republic of Reporting Year: 2005

Reporting Group: **Quito-CEEA**

Inventory Reporting Date: December 2005

Waste Matrix Used: A

Description: For spent sealed radioactive sources

Site Name	Facility Name	Facilities Defined		
Quito-CEEA	Aychapicho		storage	

Reporting Group Quito-CEEA, Site Structure: Quito-CEEA

Country: Ecuador, Republic of Reporting Year: 2005

Full Name: Comision Ecuatoriana de Energia Atomica, Quito

License Holder(s) :

The following list the waste management facilities that are located at this site.

Facility: Aychapicho

Description	A small building to store SRS.

Storage part of the "Aychapicho" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
IND. + HOSPITAL WASTES	No	No			
SRS	Yes	No			

List SRS?	Yes
Capacity	

Types of Storage Units

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

Reporting Group Quito-CEEA, Site Data: Quito-CEEA

Country: Ecuador, Republic of Reporting Year: 2005

Full Name: Comision Ecuatoriana de Energia Atomica, Quito

Inventory Reporting Date: December 2005 Waste Matrix: A

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cs-137		1		No	Yes	0	2.74E+01	2007.03
		2.74E+01						
Cs-137	6			No	Yes	4	1.24E+00	2007.03
	1.24E+00							
Cs-137	4			No	Yes	0	2.35E+00	2007.03
	2.35E+00							
Co-60		1		No	Yes	1	7.29E+03	2007.03
		7.29E+03						
Co-57	2			No	Yes	5	3.36E-06	2007.03
	3.36E-06							
Co-60	5			No	Yes	3	1.21E-01	2007.03
	1.21E-01							
Co-60	1			Yes	No	3	1.92E-01	2007.03
	1.92E-01							
Co-60		2		Yes	No	1	2.22E+04	2007.03
		2.22E+04						
Cs-137	7			Yes	No	3	1.52E+01	2007.03
	1.52E+01							
Cs-137	11			No	Yes	3	9.98E+00	2007.03
	9.98E+00							
Cs-137		5		Yes	No	3	3.95E+01	2007.03
		3.95E+01						
Cs-137		12		No	Yes	3	4.22E+02	2007.03
		4.22E+02						
Ir-192	3			No	Yes	2	1.26E-04	2007.03
	1.26E-04							
Sr-90	12			Yes	No	4	4.78E+00	2007.03
	4.78E+00							
Kr-85		1		Yes	No	4	1.47E+01	2007.03
		1.47E+01						

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226 Neutron Gen.	1		No	Yes	4	1.65E-01	2007.03
	1.65E-01						
Am-241 Neutron Gen.		13	No	Yes	3	1.92E+03	2007.03
		1.92E+03					
Am-241 Neutron Gen.	5		No	Yes	4	7.84E+00	2007.03
	7.84E+00						

Reporting Group Quito-CEEA, Site Data: Quito-CEEA

Country: Ecuador, Republic of Reporting Year: 2005

Am-241 Neutron Gen.		1	No	Yes	4	2.11E+00	2007.03
		2.11E+00					
Am-241		1	Yes	No	4	3.64E+00	2007.03
		3.64E+00					
Am-241	1		No	Yes	4	4.93E-01	2007.03
	4.93E-01						
Ra-226	96		Yes	No	2	2.64E+01	2007.03
	2.64E+01						
Ra-226		2	No	Yes	2	7.70E+00	2007.03
		7.70E+00					

REGULATORS

Country: Ecuador, Republic of

Reporting Year: 2005

Name	CEEA
Full Name	Comision Ecuatoriana de Energia Atomica
Division	Coordinacion de Regulación y Control del Uso de las radiaciones Ionizantes
City or Town	Quito

REGULATIONS / LAWS

Country: Ecuador, Republic of Reporting Year: 2005

Name	RSR	
Title or Name	Reglamento de Seguridad Radiologica	
Reference Number	Registro Oficial No. 891 de 1979	
Date Promulgated or Proclaimed	1979-08-08	Regulation

MILESTONES

Country: Ecuador, Republic of

Reporting Year: 2005

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
The CEEA has collected spent radioactive sources since about 20 years ago and stored them in a unique location within the country. This place which is a Temporary Radioactive Waste Storage is placed in the Center of Nuclear Studies of Ecuador in a site called Aychapicho, close to the town Aoag.			

Policies

Country: Ecuador, Republic of | Reporting Year: 2005

National Systems

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

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

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Partially
5	specified a rational set of safety, radiological and environmental protection objectives	Partially
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Partially
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
10	implemented appropriate research and development to support the operational and regulatory needs	No
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	No
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Incomplete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	No
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Partially
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Partially

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - Some
41	Environmental Impact Statement (EIS)	Yes - Some
42	Performance Assessment (PA)	Yes - Some
43	Quality Assurance (QA)	No
44	Safety Assessment (SA)	Yes - Some

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

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	No
61	waste minimization	No
62	waste storage	No
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)

Policies

Country: Ecuador, Republic of **Spent SRS** Reporting Year: 2005

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	Yes
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

	Procedures	(Yes;No)
78	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)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	No
84	Do any agreements include suppliers that are outside of your Country?	No

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	No
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for

Estonia

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:02:29

Waste Class Matrix(ces) Used/Defined

Country: Estonia, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #320: Waste Matrix

The IAEA waste matrix is not specified in any law in Estonia and it is used to report to the NEWMDB

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Estonia, Republic of

Reporting Year: 2005

Reporting Group: **National**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description:

Site Name	Facility Name	Facilities Defined		
Paldiski	Pald_WTF	processing		
	Pald_RWSF		storage	
Tammiku	Tammiku			disposal

Reporting Group National, Site Structure: Paldiski

Country: Estonia, Republic of Reporting Year: 2005

Full Name:	The Former Soviet Navy Nuclear Training Centre
Location:	45km west of Tallinn
License Holder(s) :	A.L.A.R.A. AS, National RWMO

Comment #425: unprocessed waste

unprocessed waste is metallic scrap, concrete rubble,
plastic, etc. from decontamination and dismantling activities packaged into plastic bags and stored in 17 half-height ISO containers before treatment or conditioning.

Comment #426: processed waste

processed waste consists of 221 waste packages: 205 packages with conditioned D&D waste, and 16 packages with SRS in their shielding blocks or transport containers.
Cutted pieces of 20 control rods are stored in four specific waste packages.

Attachment #1149: Remediation and Decommissioning of Radioative Waste Facilities in Estonia.
Paper presented in Malta conference, November 2001

File name: IAEA-CN-87-32.doc

File type: PDF Document

Member State's Reference # IAEA-CN-87_32

Attachment #1150: Paper presented in ASME Conference Radioactive Waste Management and Environmental Restoration, Nagoya, Japan, 1999

File name: 455 ICEM.pdf

File type: PDF Document

Member State's Reference # Nagoya_99

The following list the waste management facilities that are located at this site.

Facility: Pald_WTF

Description	Paldiski Waste Treatment Facility

Processing part of the "Pald_WTF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1998

Reporting Group National, Site Structure: Paldiski

Country: Estonia, Republic of Reporting Year: 2005

Facility: Pald_RWSF

Description	Paldiski Radioactive Waste Storage (includes SRS storage)

Storage part of the "Pald_RWSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Pald_RWSF	building	1997	No	No	Yes	Yes

Reporting Group National, Site Structure: Tammiku

Country: Estonia, Republic of Reporting Year: 2005

Full Name: Tammiku Radioactive Waste Depository

Location: 12 km south of Tallinn

License Holder(s) : A.L.A.R.A. AS, National RWMO

Attachment #1147: Short description of the Tammiku facility

File name: Tammiku.PDF

File type: PDF Document

The following list the waste management facilities that are located at this site.

Facility: Tammiku

Description	RADON type facility for institutional RW

Disposal part of the "Tammiku" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	0-3		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
operation		1963	1995

REGULATORS

Country: Estonia, Republic of Reporting Year: 2005

Name	MoE
Full Name	Ministry of the Environment
Division	
City or Town	Tallinn

REGULATIONS / LAWS

Country: Estonia, Republic of Reporting Year: 2005

Name	Rad_Act	
Title or Name	Radiation Act (Kiirgusseadus)	
Reference Number	RT I 2004, 26, 173	
Date Promulgated or Proclaimed	2004-04-07	Law

Attachment #1148: Development and Problems of Radioactive Waste Management Infrastructure in Estonia. Paper presented in Malta Conference, November 2001

File name: IAEA-CN-87_97P.PDF

File type: PDF Document

Member State's Reference # IAEA-CN-87_97P

Name	KKM_8_2005	
Title or Name	The Classification of Radioactive Waste, the Requirements for Registration, Management and Delivery of Radioactive Waste and the Acceptance Criteria for Radioactive Waste	
Reference Number	RTL, 17.02.2005, 20, 244	
Date Promulgated or Proclaimed	2005-02-20	Regulation

Policies

Country: Estonia, Republic of

Reporting Year: 2005

National Systems

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

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

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Partially
5	specified a rational set of safety, radiological and environmental protection objectives	Partially
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Partially
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
9	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
10	implemented appropriate research and development to support the operational and regulatory needs	No
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility

15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete

Regulatory Body Responsibility

20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Incomplete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - Some
41	Environmental Impact Statement (EIS)	No
42	Performance Assessment (PA)	No
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - Some

Policies

Country: Estonia, Republic of **Disposal Facilities** Reporting Year: 2005

46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No

	Post-Closure	(Yes;No)
48	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
49	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?	No
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	Yes
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

	Spent Fuel	(Yes;No)

Policies

Country: Estonia, Republic of **Import-Export** Reporting Year: 2005

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

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

Country Waste Profile Report for

Finland

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:03:05

Waste Class Matrix(ces) Used/Defined

Country: Finland Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: FIN_RADW

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
reactor waste	99	1	0
spent fuel	0	0	100

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

Comment #104: basis of the classification for reactor wastes

The classification of reactor wastes used in Finland is given in Safety Guide 8.3, where the reactor wastes are divided into low level and intermediate level waste categories (http://www.stuk.fi/saannosto/YVL8-3e.html.) According to national laws, spent fuel is classified as waste but is not reported here. At the Loviisa site, wet reactor wastes are stored waiting for disposal starting in a few years. Long-lived reactor waste is mainly activated metal waste. Safety Guide 1.5 concerns on reporting.

Waste Class Matrix: FIN_RADW2

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LILW	100	0	0
spent fuel	0	0	100

Waste Class Matrix: FIN_RADW3

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
small user waste	90	10	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 NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Finland Reporting Year: 2005

Reporting Group: **Lo_NPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: FIN_RADW

Description: Loviisa NPP.

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

Reporting Group: **Ol_NPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: FIN_RADW

Description: Olkiluoto NPP

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

Reporting Group: **Posiva**

Inventory Reporting Date: December 2005

Waste Matrix Used: FIN_RADW

Description: Posiva Oy, nuclear waste managment company

Site Name	Facility Name	Facilities Defined		
Olkiluoto	SFdisposal			disposal

Reporting Group: **STUK/TKO**

Inventory Reporting Date: December 2005

Waste Matrix Used: FIN_RADW3

Description: STUK's Research and Environmental surveillance (STUKin tutkimusosasto)

Site Name	Facility Name	Facilities Defined		
SSOW	SSOW		storage	

Groups Overview

Country: Finland Reporting Year: 2005

Reporting Group: **VTT/FIR**

Inventory Reporting Date: December 2005

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	

Reporting Group Lo_NPP, Site Structure: Loviisa

Country: Finland Reporting Year: 2005

Full Name: Loviisa NPP

License Holder(s) : Fortum Power and Heat Oy

The following list the waste management facilities that are located at this site.

Facility: LO1

Description	processing and storage of reactor waste

Processing part of the "LO1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	No	No	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1977

Storage part of the "LO1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	No				
Capacity	activated components can be stored here at loading ponds etc.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LO1	building	1977	No	No	No	No

Reporting Group Lo_NPP, Site Structure: Loviisa

Country: Finland Reporting Year: 2005

Facility: LO2

Description	processing and storage of reactor waste

Processing part of the "LO2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	No	No	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1980

Storage part of the "LO2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Capacity	activated components can be stored here at loading ponds etc.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LO2	building	1980	No	No	No	No

Facility: NPP-Area

Description	Nuclear power plant storage area

Storage part of the "NPP-Area" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	Yes	Yes
SRS	No	No			
List SRS?	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

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
NPPStorage	building	1977	No	No	No	No

Reporting Group Lo_NPP, Site Structure: Loviisa

Country: Finland Reporting Year: 2005

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 m3.

Storage part of the "DT" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	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.				

Types of Storage Units

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

Disposal part of the "DT" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is modular			
Capacity - existing (m3)	2500	Capacity -planned (m3)	8740
Depth (m)	110		
Host medium	crystalline rock (gneiss)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1980	1986
site selection		1980	1983
design		1983	1986
construction		1993	1997
commissioning		1997	1998
operation		1998	

Comment #9656: Disposal Tunnels DT

The first disposal tunnel in 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.

Reporting Group Lo_NPP, Site Data: Loviisa

Country: Finland Reporting Year: 2005

Full Name: Loviisa NPP

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
reactor waste	Storage LO1	No	8.52	100	0	0	0	0	0	0	Yes
reactor waste	Storage LO2	No	10.02	100	0	0	0	0	0	0	Yes
reactor waste	Storage NPP-Area	No	1161.5	100	0	0	0	0	0	0	Yes
reactor waste	Storage LO2	Yes	205.5	100	0	0	0	0	0	0	Yes
reactor waste	Storage NPP-Area	Yes	133.3	50	0	0	0	0	0	50	Yes
reactor waste	Disposal DT	Yes	1329.6	100	0	0	0	0	0	0	No

Comment #7172: The additional characteristics of the waste

Processed: solid (dispersible), solid (non-dispersible)

Waste Class	Status
spent fuel (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Evaporation			same	
Filtration			same	

Processing - Conditioning method(s)

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

Reporting Group Ol_NPP, Site Structure: Olkiluoto

Country: Finland | Reporting Year: 2005

Full Name: Olkiluoto NPP

License Holder(s) : Teollisuuden Voima Oy

The following list the waste management facilities that are located at this site.

Facility: OL1

Description	processing and storage of reactor waste

Processing part of the "OL1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	No	No	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1978

Storage part of the "OL1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	No				
Capacity	activated components can be stored here at loading ponds etc.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
OL1	building	1978	No	No	No	No

Reporting Group Ol_NPP, Site Structure: Olkiluoto

Country: Finland Reporting Year: 2005

Facility: OL2

Description	processing and storage of reactor waste

Processing part of the "OL2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	No	No	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1980

Storage part of the "OL2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	No				
Capacity	activated components can be stored here at loading ponds etc.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
OL2	building	1980	No	No	No	No

Facility: NPP-Area

Description	Power plant storage area

Storage part of the "NPP-Area" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Nuclear power plant area can be used for storing purposes for waste that will not be disposed immediately.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
NPPStorage	building	2000	No	No	No	No

Reporting Group Ol_NPP, Site Structure: Olkiluoto

Country: Finland Reporting Year: 2005

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 the "VLJ-KAJ" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is non modular			
Capacity - existing (m3)	6400	Capacity -planned (m3)	6400
Depth (m)	100		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1980	1986
site selection		1980	1983
design		1983	1986
construction		1988	1991
commissioning		1991	1991
operation		1992	

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.

Reporting Group OI_NPP, Site Structure: Olkiluoto

Country: Finland Reporting Year: 2005

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 the "VLJ-MAJ" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	Yes	Yes	spent fuel	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is non modular			
Capacity - existing (m3)	9100	Capacity -planned (m3)	9100
Depth (m)	100		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1980	1986
site selection		1980	1983
design		1983	1986
construction		1988	1991
commissioning		1991	1991
operation		1992	

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.

Reporting Group OI_NPP, Site Data: Olkiluoto

Country: Finland | Reporting Year: 2005

Full Name: Olkiluoto NPP

Inventory Reporting Date: December 2005 | Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
reactor waste	Storage NPP-Area	No	772	100	0	0	0	0	0	0	Yes
reactor waste	Storage OL1	No	1	100	0	0	0	0	0	0	Yes
reactor waste	Storage OL2	No	26	100	0	0	0	0	0	0	Yes
reactor waste	Storage OL1	Yes	2	100	0	0	0	0	0	0	Yes
Comment #7176: The additional characteristics of the waste Unprocessed: solid (non-dispersible)											
reactor waste	Disposal VLJ-KAJ	Yes	1584	100	0	0	0	0	0	0	No
reactor waste	Disposal VLJ-MAJ	Yes	2854	100	0	0	0	0	0	0	No
Comment #7177: The additional characteristics of the waste Processed: solid (non-dispersible)											

Waste Class	Status
spent fuel (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

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

Reporting Group Posiva, Site Structure: Olkiluoto

Country: Finland

Reporting Year: 2005

Full Name: Olkiluoto, the forthcoming repository for spent fuel

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

The following list the waste management facilities that are located at this site.

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 the "SFdisposal" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
reactor waste	No	No	spent fuel	No	Yes
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is non modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	not specified
Depth (m)	400-700		
Host medium	crystalline rock (gneiss)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1983	1985
site selection			2001
design			2003
construction	Yes	2012	

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.

Reporting Group STUK/TKO, Site Structure: SSOW

Country: Finland Reporting Year: 2005

Full Name: Storage for Stated Owned Waste

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).

The following list the 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 the "SSOW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
small user waste	Yes	Yes			
SRS	Yes	No			

List SRS?	No
Capacity	Amount of packed waste can not be >100 m3. Non nuclear waste is accepted.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSOW	cave	1997	No	No	No	Yes

Reporting Group STUK/TKO, Site Data: SSOW

Country: Finland Reporting Year: 2005

Full Name: Storage for Stated Owned Waste

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
small user waste	Storage SSOW	No	47.7	0	0	0	100	0	0	0	No

Reporting Group VTT/FIR, Site Structure: FIR

Country: Finland Reporting Year: 2005

Full Name: VTT FIR

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

The following list the waste management facilities that are located at this site.

Facility: LILW-Proc

Description	processing facility for LILW

Processing part of the "LILW-Proc" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	spent fuel	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1962

Facility: LILW-Store

Description	storage facility for LILW

Storage part of the "LILW-Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	spent fuel	No	No
SRS	No	No			
List SRS?	No				
Capacity	The facility stores all waste produced by the research reactor of FiR.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Cellar	building	1962	No	No	No	No

Facility: SF storage

Description	Reactor hall storage for the spent fuel of the research reactor

Storage part of the "SF storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	spent fuel	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Can contain all spent fuel of the research reactor.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Well	well	1962	No	No	No	No

Reporting Group VTT/FIR, Site Data: FIR

Country: Finland Reporting Year: 2005

Full Name: VTT FIR

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW	Storage LILW-Store	No	6	50	0	0	50	0	0	0	No

Comment #7178: The additional characteristics of the waste

Unprocessed: resin, solid (non-dispersible)

Waste Class	Status
spent fuel (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

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

REGULATORS

Country: Finland Reporting Year: 2005

Name	STUK
Full Name	Radiation and nuclear Safety Authority
Division	Nuclear Waste and Materials Regulation
City or Town	Helsinki

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: 2005

Name	NE Act	
Title or Name	Nuclear Energy Act (990/1987)	
Reference Number	990/1987	
Date Promulgated or Proclaimed	1988-12-11	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	162/1988	
Date Promulgated or Proclaimed	1988-02-12	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	1991-03-27	Law

Comment #7158: Wastes that are regulated by the Law

Matrix FIN_RADW3 - small waste

Name	Gov R 478	
Title or Name	Decision of the Government on the General Regulations for the Safety of Spent Fuel Disposal (478/1999)	
Reference Number	478/1999	
Date Promulgated or Proclaimed	1999-03-25	Regulation

Name	Gov R 398	
Title or Name	Decision of the Government on the General Regulations for the Safety of a Disposal Facility for Reactor Waste (398/1991)	
Reference Number	398/1991	
Date Promulgated or Proclaimed	1991-02-14	Regulation

Comment #7160: Wastes that are regulated by the Regulation

Matrix FIN_RADW - reactor waste

REGULATIONS / LAWS

Country: Finland Reporting Year: 2005

Name	Gov R 395	
Title or Name	Decision of the Government on the General Regulations for the Safety of Nuclear Power Plants (395/1991)	
Reference Number	395/1991	
Date Promulgated or Proclaimed	1991-03-01	Regulation

Name	YVL 8.1	
Title or Name	Guide YVL 8.1, Disposal of reactor waste (1991).	
Reference Number	YVL 8.1	
Date Promulgated or Proclaimed	1991-09-20	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 from regulatory control of nuclear waste (1992).	
Reference Number	YVL 8.2	
Date Promulgated or Proclaimed	1992-03-19	Regulation

Name	YVL 8.3	
Title or Name	Guide YVL 8.3, Treatment and storage of radioactive waste at nuclear power plant (1996).	
Reference Number	YVL 8.3	
Date Promulgated or Proclaimed	1996-08-20	Regulation

Name	YVL 8.4	
Title or Name	Guide YVL 8.4, Long-term safety of disposal of spent nuclear fuel (2001).	
Reference Number	YVL 8.4	
Date Promulgated or Proclaimed	2001-05-21	Regulation

REGULATIONS / LAWS

Country: Finland Reporting Year: 2005

Name	ST 6.2	
Title or Name	Guide ST 6.2, Radioactive wastes and discharges (1992).	
Reference Number	ST 6.2	
Date Promulgated or Proclaimed	1992-07-01	Regulation

Comment #7166: Wastes that are regulated by the Regulation

Matrix FIN_RADW3 - small waste

Name	ST 5.1	
Title or Name	ST Guide 5.1 Radiation Safety of Sealed Sources and Equipment Containing Them, 17 February 1999	
Reference Number	ST 5.1	
Date Promulgated or Proclaimed	1999-02-17	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 (2002).	
Reference Number	YVL 8.5	
Date Promulgated or Proclaimed	2002-12-23	Regulation

Name	YVL 8.5	
Title or Name	Operation of the final disposal facility for spent nuclear fuel.	
Reference Number	YVL 8.5	
Date Promulgated or Proclaimed	2002-12-23	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	1983-12-22	Law

REGULATIONS / LAWS

Country: Finland Reporting Year: 2005

Name	ACNS Dec	
Title or Name	Decree on Advisory Committee on Nuclear Safety (164/1988)	
Reference Number	164/1988	
Date Promulgated or Proclaimed	1988-02-12	Law

Name	NE Dec	
Title or Name	Nuclear Energy Decree (161/1988)	
Reference Number	161/1988	
Date Promulgated or Proclaimed	1988-02-12	Law

Name	TPL Act	
Title or Name	Act on Third Party Liability (484/1972)	
Reference Number	484/1972	
Date Promulgated or Proclaimed	1972-06-06	Law

Name	TPL Dec	
Title or Name	Decree on the Implementation of Third Party Liability (486/1972)	
Reference Number	486/1972	
Date Promulgated or Proclaimed	1972-06-16	Law

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

REGULATIONS / LAWS

Country: Finland Reporting Year: 2005

Name	STUK Dec	
Title or Name	Decree on the Finnish Centre for Radiation and Nuclear Safety (618/1997)	
Reference Number	618/1997	
Date Promulgated or Proclaimed	1997-07-01	Law

Name	ACNE Dec	
Title or Name	Decree on Advisory Committee on Nuclear Energy (163/1988)	
Reference Number	163/1988	
Date Promulgated or Proclaimed	1988-02-12	Law

Name	EIA Act	
Title or Name	Act on the Environmental Impact Assessment Procedure (468/1994)	
Reference Number	468/1994	
Date Promulgated or Proclaimed	1996-06-10	Law

Name	EIA Dec	
Title or Name	Decree on Environmental Impact Assessment Procedure (792/1994)	
Reference Number	792/1994	
Date Promulgated or Proclaimed	1994-08-25	Law

Name	OGA Act	
Title or Name	Act on the Openness of Government Activities (621/1999)	
Reference Number	621/1999	
Date Promulgated or Proclaimed	1999-05-21	Law

REGULATIONS / LAWS

Country: Finland Reporting Year: 2005

Name	PNRE Dec	
Title or Name	Decree of Ministry of Interior Concerning Planning for Nuclear or Radiological Emergences and for Informing the Public about Radiation Hazards (774/2001)	
Reference Number	774/2001	
Date Promulgated or Proclaimed	2001-08-31	Law

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

Name	Gov R 165	
Title or Name	Decision of the Government Concerning the Providing for Nuclear Waste Management Costs (165/1988)	
Reference Number	165/1988	
Date Promulgated or Proclaimed	1988-02-18	Regulation

Name	Gov R 396	
Title or Name	Decision of the Government on the General Regulations for Physical Protection of Nuclear Power Plants (396/1991)	
Reference Number	396/1991	
Date Promulgated or Proclaimed	1991-02-14	Regulation

Name	Gov R 397	
Title or Name	Decision of the Government on the General Regulations for Emergency Response Arrange-ments at Nuclear Power Plants (397/1991)	
Reference Number	397/1991	
Date Promulgated or Proclaimed	1991-02-14	Regulation

MILESTONES

Country: Finland | Reporting Year: 2005

Start Year or Reference Year:	1992	End Year	1992
Description of Milestone			
1992 start of operation of Olkiluoto LILW repository.			

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:	2001	End Year	2001
Description of Milestone			
DiP and site selection for SF disposal.			

Policies

Country: Finland Reporting Year: 2005

National Systems

	Policy	(Yes;Partially;No)
1	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)
2	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 Ob-served in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Man-agement.

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	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).

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete

Policies

Country: Finland **National Systems** Reporting Year: 2005

16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Complete
101	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)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes

117	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

If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below

Comment #9691: Policies National Systems-Clearance

YVL 8.2 Guide.

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	No
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	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)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

	Implementation	(Yes;No)
67	In your Country are there any waste processing facilities at the same location where the waste is generated?	Yes
68	In your Country are there any centralized waste processing facilities?	No
69	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)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	No
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

	Procedures	(Yes;No)
78	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)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	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)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	Yes
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
89	Has your Country implemented dedicated disposal facilities for spent SRS?	No
90	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.

Import-Export

	Radioactive Waste	(Yes;No)
91	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)
92	Does your Country have laws or Regulations restricting either the import or export of spent fuel?	Yes

Liquid HLW

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

UMMT

Policies

Country: Finland **UMMT** Reporting Year: 2005

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	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)
99	Does your Country require a time frame for the decommissioning of nuclear fuel cycle facilities once these facilities cease operation?	No
100	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 decomission for nuclear fuel cycle facilities are included in periodically updated decomissioning plans, which are reviewed by the regulator.

Comment #9690: Policies Decommissioning-Timeframe

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

Country Waste Profile Report for

Hungary

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:21:07

Waste Class Matrix(ces) Used/Defined

Country: Hungary, Republic of

Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Waste Class Matrix: PURAM

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LLW	90	10	0
MLW	60	40	0
HLW	0	5	95

Description: LLW (low level waste): 1<A/EAC<10E3
MLW (medium level waste) 10E3 <A/EAC<10E6
HLW (high level waste): 10E6<A/EAC
where
A: activity-concentration
EAC:exemption activity-concentration (given by the Decree of the Minister of Public Welfare No. 23/1997. (VII. 18.) on the exemption levels of radionuclides)

Comment #319: determination of matrix percentages

The percentages in both matrices are based upon waste characterization results, which provided a general understanding of the wastes in Hungary. These characteristics were compared with the specifications for the IAEA's waste classification scheme.

Waste Class Matrix: PNPP

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LLW	95	5	0
MLW	30	70	0
HLW	0	25	75

Description: LLW (low level waste): 1<A/EAC<10E3
MLW (medium level waste) 10E3 <A/EAC<10E6
HLW (high level waste): 10E6<A/EAC
where
A: activity-concentration
EAC:exemption activity-concentration (given by the Decree of the Minister of Public Welfare No. 23/1997. (VII. 18.) on the exemption levels of radionuclides)

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Hungary, Republic of

Reporting Year: 2005

Reporting Group: **PNPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Paks Nuclear Power Plant operational radioactive waste stored on-site

Site Name	Facility Name	Facilities Defined		
Paks	Compaction	processing		
	Evaporat.	processing		
	PaksStore		storage	

Reporting Group: **PURAM**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Public Agency for Radioactive Waste Management

Site Name	Facility Name	Facilities Defined		
Püspökszil	VAULTS	processing	storage	disposal
	STORAGE		storage	
	SSRS			disposal
Üveghuta	DISPOSAL			disposal

Reporting Group PNPP, Site Structure: Paks

Country: Hungary, Republic of Reporting Year: 2005

Full Name: Paks Nuclear Pover Plant

License Holder(s) : Paks Nuclear Power Plant Ltd.

The following list the waste management facilities that are located at this site.

Facility: Compaction

Description	solid waste compression

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1988

Facility: Evaporat.

Description	Liquid waste evaporation

Processing part of the "Evaporat." facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1985

Reporting Group PNPP, Site Structure: Paks

Country: Hungary, Republic of Reporting Year: 2005

Facility: PaksStore

Description	Storage for operational waste

Storage part of the "PaksStore" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	1500 m3 for solid waste 11100 m3 for liquid waste 220 m3 for HLW

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SOLID	building	1982	No	No	No	No
LIQUID	tank (other)	1982	No	No	No	No
SOLID_H	well	1982	No	No	No	No

Reporting Group PNPP, Site Data: Paks

Country: Hungary, Republic of Reporting Year: 2005

Full Name: Paks Nuclear Pover Plant

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	300	100	0	0	0	0	0	0	No
LILW-SL	Storage	Yes	1187	100	0	0	0	0	0	0	No
LILW-LL	Storage	No	1211	100	0	0	0	0	0	0	No
LILW-LL	Storage	Yes	4749	100	0	0	0	0	0	0	No
HLW	Storage	No	64	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Ion Exchange			same	
Wastewater Treatment		Yes		

Reporting Group PURAM, Site Structure: Püspökszil

Country: Hungary, Republic of Reporting Year: 2005

Full Name: Püspökszilágy LILW Repository

License Holder(s) : Public Agency for Radioactive Waste Management

Comment #339: Percentage of Capacity Used

The percentage of disposal facility capacity used takes in to consideration the volume of waste plus losses due to voids, buffer and backfill materials

The following list the waste management facilities that are located at this site.

Facility: VAULTS

Description	concrete disposal vaults

Processing part of the "VAULTS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1977

Storage part of the "VAULTS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	5040 m3				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
vaults	pool	1977	No	No	No	No

Disposal part of the "VAULTS" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	5040	Capacity -planned (m3)	5040
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
site selection		1974	1974
design		1974	1974

construction		1974	1976
commissioning		1976	1977
operation		1977	

Facility: STORAGE

Description	Storage for long lived radioactive sources

Storage part of the "STORAGE" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	200 m3

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Store	building	0	No	No	No	No

Facility: SSRS

Description	SRS steel lined disposal wells (see comment 7620)

Disposal part of the "SSRS" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	Yes	Yes			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	2	Capacity -planned (m3)	2
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
site selection		1974	1974
design		1974	1974
construction		1974	1976
commissioning		1976	1977
operation		1977	

Comment #7620: facility capacity

The capacity (existing and planned) is 1.6 m3. The respository consists of an array of boreholes lined with stainless steel with an approximate diameter of 10-20 cm and 6 m deep.

The NEWMDB has a limitation that only integer values can be entered for capacity, therefore the value shown for the facility was rounded by the database to 2 m3

Reporting Group PURAM, Site Data: Püspökszil

Country: Hungary, Republic of Reporting Year: 2005

Full Name: Püspökszilágy LILW Repository

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	No	1330	20	0	0	20	2	8	50	No
LILW-SL	Disposal	Yes	685	80	0	0	0	0	0	20	No
LILW-LL	Storage	No	6	0	0	0	50	0	0	50	No
LILW-LL	Disposal	No	1996	20	0	0	20	2	8	50	No
LILW-LL	Disposal	Yes	1029	80	0	0	0	0	0	20	No
HLW	Disposal	Yes	0.2	0	0	0	0	0	0	100	No

Waste Class	Status
LILW-SL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization				Yes
Cementation			increase	
Encapsulation			same	

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cs-137	1859	790		No	Yes	0	8.57E+03	
	4.09E+02	8.16E+03						
Sr-90	1002	311		Yes	No	0	2.98E+04	
	9.53E+01	2.97E+04						
H-3	418	1969		Yes	Yes	0	1.53E+05	
	3.11E+01	1.53E+05						
Kr-85	6970			Yes	Yes	0	1.75E+02	
	1.75E+02							
Co-60	6261	1113		Yes	Yes	0	5.32E+05	
	1.95E+02	5.32E+05						
Pm-147	709			No	Yes	0	2.59E+01	
	2.59E+01							
Po-210 Neutron Gen.	531			No	Yes	0	4.57E+01	
	4.57E+01							
Tm-170	117			No	Yes	0	7.90E-11	
	7.90E-11							
Ir-192	4540	90		Yes	No	0	3.24E+03	
	1.01E+01	3.23E+03						

Reporting Group PURAM, Site Data: Püspökszil

Country: Hungary, Republic of Reporting Year: 2005

Spent Sources >30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Pu-238 Neutron Gen.	3	3	No	Yes	0	8.37E+02	
	1.04E+00	8.36E+02					
Ra-226 Neutron Gen.	21	20	No	Yes	0	1.53E+02	
	1.88E+01	1.34E+02					
Am-241 Neutron Gen.	50	56	No	Yes	0	8.16E+03	
	9.31E+01	8.07E+03					
Tc-99	3091		No	Yes	0	1.91E+02	
	1.91E+02						
Pu-239	482	1	No	Yes	0	1.23E+01	
	2.61E+00	9.68E+00					
C-14		152	Yes	No	0	5.35E+03	
		5.35E+03					
Ra-226	1643		Yes	No	0	2.25E+02	
	2.25E+02						
Am-241	6476	119	No	Yes	0	1.87E+03	
	1.10E+02	1.76E+03					
Pu-238	72		No	Yes	0	1.16E+02	
	1.16E+02						

Reporting Group PURAM, Site Structure: Üveghuta

Country: Hungary, Republic of Reporting Year: 2005

Full Name: Bátaapáti LILW repository

License Holder(s) :

The following list the waste management facilities that are located at this site.

Facility: DISPOSAL

Description	solid or solidified waste disposal

Disposal part of the "DISPOSAL" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	Yes
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	20000
Depth (m)	250-300		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1993	1996
site selection		1996	2005
design		1996	

REGULATORS

Country: Hungary, Republic of

Reporting Year: 2005

Name	NPHMOS
Full Name	National Public Health and Medical Officer Service
Division	
City or Town	Budapest

Comment #6582: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix PNPP - HLW, LLW, MLW; Matrix PURAM - HLW, LLW, MLW (in radioactive waste repositories)

Name	HAEA
Full Name	Hungarian Atomic Energy Authority
Division	
City or Town	Budapest

Comment #6583: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix PNPP - HLW, LLW, MLW (in nuclear facilities)

REGULATIONS / LAWS

Country: Hungary, Republic of Reporting Year: 2005

Name	Atomic Law	
Title or Name	Act No. CXVI. of 1996 on Atomic Energy	
Reference Number	116/1996 tv.	
Date Promulgated or Proclaimed	1996-12-18	Law

Name	PURAM	
Title or Name	Governmental Decree No. 240/1997. (XII. 18.) Korm., on the establishment of the organisation designated for implementing disposing of radioactive waste disposal and spent fuel, as well as decommissioning of nuclear installations, and on the financial source of performing its tasksactivities.	
Reference Number	240/1997 korm.	
Date Promulgated or Proclaimed	1997-12-18	Regulation

Name	Exemption	
Title or Name	Governmental Decree No. 124/1997. (VII. 18.) Korm., on radioactive materials as well as equipment generating ionising radiation, exempted from the scope of the Atomic Energy Act No. CXVI of 1996.	
Reference Number	124/1997 korm.	
Date Promulgated or Proclaimed	1997-07-18	Regulation

Name	ActLevels	
Title or Name	Order of the Minister of Public Welfare No. 23/1997. (VII. 18.) NM defining the exemption levels (activity concentrations and activities cf. ICRP-60) of radionuclides.	
Reference Number	23/1997 NM	
Date Promulgated or Proclaimed	1997-07-18	Regulation

Name	RadProt	
Title or Name	Order of the Minister of Health No. 16/2000. (VI. 8.) EüM on the execution of certain provisions of the Act No. CXVI. of 1996 on Atomic Energy associated with radiation protection.	
Reference Number	16/2000 EüM	
Date Promulgated or Proclaimed	2000-06-08	Regulation

REGULATIONS / LAWS

Country: Hungary, Republic of Reporting Year: 2005

Name	SiteSelect	
Title or Name	Order of the Minister of Industry, Trade and Tourism No. 62/1997(XI.26.) IKIM on the Geological and Mining Requirements for the Siting and Planning of Nuclear Facilities and Radioactive Waste Disposal Facilities.	
Reference Number	62/1997 IKIM	
Date Promulgated or Proclaimed	1997-11-26	Regulation

Name	NuclFund	
Title or Name	Order of the Minister of Justice No. 14/2005 (VII.25.) IM on the operation and administration of the Central Nuclear Financial Fund.	
Reference Number	14/2005 IM	
Date Promulgated or Proclaimed	2005-07-25	Regulation

Name	HAEA	
Title or Name	Government Decree 114/2003 (VII.29.) on the Scope of Duty, Authority and Jurisdiction of Imposing Penalty of the Hungarian Atomic Energy Authority, and on the Activities of the Atomic Energy Council	
Reference Number	114/2003 Korm.	
Date Promulgated or Proclaimed	2003-07-29	Regulation

Name	St&Disp	
Title or Name	Decree of the Minister of Health, Social and Family Affairs 47/2003 (VIII.8.) on some aspects of the interim storage and final disposal of radioactive waste and on the radiological aspects of radioactive materials arising from industrial activities and naturally occurring radioactive materials	
Reference Number	47/2003 ESzCsM	
Date Promulgated or Proclaimed	2003-08-08	Regulation

MILESTONES

Country: Hungary, Republic of   Reporting Year: 2005

Start Year or Reference Year:	1960	End Year	1960
Description of Milestone			
LILW: Start of operation of an interim storage in Solymár.			

Start Year or Reference Year:	1976	End Year	1976
Description of Milestone			
LILW: Licencing of the Radioactive Waste Treatment and Disposal Facility in Püspökszilágy for institutional waste.			

Start Year or Reference Year:	1986	End Year	1986
Description of Milestone			
LILW: A disposal site for NPP waste was investigated in Ófalu, but the licence for construction was not granted by the Hungarian authorities.			

Start Year or Reference Year:	1989	End Year	1993
Description of Milestone			
HLW: Preliminary geological investigation of the Boda claystone formation.			

Start Year or Reference Year:	1993	End Year	1999
Description of Milestone			
HLW: Geological exploration 1100 m below surface in an underground research object in the Boda claystone formation.			

Start Year or Reference Year:	1993	End Year	1996
Description of Milestone			
LILW: A National Program was launched to select a site for a repository for NPP waste (countrywide screening and regional screening for potential sites).			

Start Year or Reference Year:	1996	End Year	
Description of Milestone			
LILW: Decision to investigate the Bátaapáti (Üveghuta) site for a subsurface repository in granite, while keeping the Udvari site for a surface repository stand-by.			

Start Year or Reference Year:	1997	End Year	1998
Description of Milestone			
LILW: Exploration of the suitability of the potential site Bátaapáti (Üveghuta).			

Start Year or Reference Year:	1998	End Year	1999
Description of Milestone			
HLW: Country-wide screening for a potential site.			

Start Year or Reference Year:	1999	End Year	
Description of Milestone			
LILW: IAEA WATRP Mission confirms the results of the investigation and recommends further exploration of Bátaapáti (Üveghuta).			

Start Year or Reference Year:	2000	End Year	
Description of Milestone			
LILW: Collection of existing data and preparation of a preliminary safety assessment to establish further investigation in Bátaapáti (Üveghuta).			

Start Year or Reference Year:	2000	End Year	2001
Description of Milestone			
HLW: Elaboration of a national policy for HLW management, aiming at the establishment of a national strategy.			

MILESTONES

Country: Hungary, Republic of | Reporting Year: 2005

Start Year or Reference Year:	2001	End Year	2003
Description of Milestone			
LILW: Detailed geological and hydrogeological survey from the surface as well as safety assessment of Bátaapáti (Üveghuta) site. The geological authority stated that the site fulfils all the requirements formulated in the relevant decree: thus, from the geological point of view it is suitable for the disposal of LILW.			

Start Year or Reference Year:	2002	End Year	2005
Description of Milestone			
LILW: Safety upgrading program (Phase I) for the Radioactive Waste Treatment and Disposal Facility in Püspökszilágy (based on previous safety assessments).			

Start Year or Reference Year:	2003	End Year	
Description of Milestone			
HLW: start of investigations to select a site of an underground laboratory in the Mecsek Mountains for the exploration of the Boda Claystone Formation.			

Start Year or Reference Year:	2004	End Year	2006
Description of Milestone			
LILW: The programme of further investigations of Bátaapáti (Üveghuta)site (construction of two paralel inclined shafts in order to determine the exact location of the repository and its safety zone) was approved by the competent minister in December 2004.			

Start Year or Reference Year:	2005	End Year	
Description of Milestone			
After the strongly supportive result of a local referendum held in the village of Bátaapáti, the Hungarian Parliament expressed its approval in principal for the construction of the repository			

Policies

Country: Hungary, Republic of | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

42	Performance Assessment (PA)	No
43	Quality Assurance (QA)	No
44	Safety Assessment (SA)	Yes - All

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

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	No
54	leachate treatment systems	No
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

	Implementation	(Yes;No)
67	In your Country are there any waste processing facilities at the same location where the waste is generated?	Yes

Policies

Country: Hungary, Republic of | **Processing/Storage** | Reporting Year: 2005

68	In your Country are there any centralized waste processing facilities?	No
69	In your Country are there any mobile waste processing facilities?	No

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

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

	Processing	(Yes - All;Yes - Some;No)
94	If your Country has high-level liquid wastes in storage, are there documented plans in place to process these liquids?	No

	Timeframe	(Yes - All;Yes - Some;No)
95	If your Country has high-level liquid wastes in storage, are there plans to have this waste be processed within a specified time frame?	No

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

Policies

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

Country Waste Profile Report for Indonesia

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:21:23

Waste Class Matrix(ces) Used/Defined

Country: Indonesia, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: National

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LILW	100	0	0
Alpha Waste	0	100	0
HLW	0	0	100

Description: LILW means LILW-SL in IAEA definition. Alpha Waste for unsealed LILW-LL, and HLW for spent fuels.

Comment #182: Waste classification

Not declared clearly on:
(1) Batan, Regulation for safety of Radwaste Management, 1986
(2) Bapeten, Regulation for safety of Radwaste Management, No.3/V-99.
(3) Act. No.10/1997 on Nuclear Energy.

The definition adapted from above regulation and radwaste management practice in Indonesia. Formally, goverment regulation is important to state clearly the above waste classification.

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	X	X		
processed			X	X

Groups Overview

Country: Indonesia, Republic of Reporting Year: 2005

Reporting Group: **Serpong**

Inventory Reporting Date: December 2005

Waste Matrix Used: National

Description: Reporting group located at Radioactive Waste Management Development Center, Serpong Research Establishment, BATAN

Site Name	Facility Name	Facilities Defined		
RWMDC	RCF	processing		
	RWI	processing		
	HAW-IS		storage	
	IS		storage	
	ENSF			disposal

Reporting Group Serpong, Site Structure: RWMDC

Country: Indonesia, Republic of Reporting Year: 2005

Full Name: Radioactive Waste Management Development Center, BATAN

License Holder(s) : Radioactive Waste Management Development Center, BATAN

The following list the waste management facilities that are located at this site.

Facility: RCF

Description	Radium Conditioning Facility (RCF) is facility for conditioning of Spent Radium Sources

Processing part of the "RCF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	Alpha Waste	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	2002

Facility: RWI

Description	Radioactive Waste Installation (RWI) is installation for processing radioactive waste such as, volume reduction and conditioning.

Processing part of the "RWI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	Alpha Waste	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1989

Reporting Group Serpong, Site Structure: RWMDC

Country: Indonesia, Republic of Reporting Year: 2005

Facility: HAW-IS

Description	Interim Storage for high active waste (HAW). The HAW mainly are fission products that generated from the Isotope Production Center. This facility is a place for delaying and reducing radiation exposure of the HAW for treatment

Storage part of the "HAW-IS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	Alpha Waste	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			

List SRS?	Yes
Capacity	Consists of 2 type of storages, pool and well storages. The pool type has 3 pools, each has a 3mx4mx3.6m dimension. The well storage has 20 wells and each well can contain 6 x 60 litres waste containers.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Pool	pool	1997	No	No	No	Yes
Well	well	1997	No	No	No	Yes

Facility: IS

Description	The IS facilitiy is for storing conditioned waste before disposal. There are 2 modules: IS-1 and IS-2.

Storage part of the "IS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	Alpha Waste	Yes	Yes
HLW	No	No			
SRS	Yes	No			

List SRS?	Yes
Capacity	Design capacity of each module is 1500 units of 200L drum and 500 units of 950L/350L shell.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
IS-1	building	1989	No	No	Yes	Yes
IS-2	building	2003	No	No	Yes	No

Reporting Group Serpong, Site Structure: RWMDC

Country: Indonesia, Republic of Reporting Year: 2005

Facility: ENSF

Description	Engineered Near Surface Disposal Facility

Disposal part of the "ENSF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	Yes	Alpha Waste	No	Yes
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	302
Depth (m)	6-7		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment	Yes	1995	2006
site selection	Yes	2007	2009
design	Yes	2010	2012
construction	Yes	2013	2015
commissioning	Yes	2015	2016
operation	Yes	2016	2026
closure	Yes	2027	2029
institutional control	Yes	2030	2130

Reporting Group Serpong, Site Data: RWMDC

Country: Indonesia, Republic of Reporting Year: 2005

Full Name: Radioactive Waste Management Development Center, BATAN

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW	Storage	Yes	171.54	63.43	0	0	36.57	0	0	0	Yes
Alpha Waste	Storage	Yes	46.4	0	0	0	4.75	0	95.25	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation	Yes			
Compaction			same	
Decontamination			same	
Evaporation			same	
Incineration			same	
Membrane Technology		Yes		

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			same	
Vitrification		Yes		

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cd-109	1			Yes	No	5	1.85E-01	2003.12 (estimate)
	1.85E-01							
Fe-55	1			Yes	No	5	1.67E+00	2003.12 (estimate)
	1.67E+00							
Cf-252	4			Yes	No	4	4.07E+00	2003.12 (estimate)
	4.07E+00							
Sr-90	108			Yes	No	5	6.33E+01	2005.12 (estimate)
	6.33E+01							
Pm-147	7	1		Yes	Yes	5	1.86E+01	2005.12 (estimate)
	1.48E-01	1.85E+01						
Kr-85	12	9		Yes	No	5	1.36E+02	2005.12 (estimate)
	1.81E-09	1.36E+02						
Ir-192	28	1		Yes	No	5	2.81E+02	2005.12 (estimate)
	3.70E-02	2.81E+02						
Cs-137	120	72	3	Yes	Yes	2	1.77E+05	2005.12 (estimate)
	5.22E+01	3.05E+03	1.74E+05					
Co-60	5	92	2	Yes	No	1	1.03E+06	2005.12 (estimate)
	6.14E+00	9.18E+05	1.15E+05					

Spent Sources >30 years in storage

Reporting Group Serpong, Site Data: RWMDC

Country: Indonesia, Republic of Reporting Year: 2005

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	850	7	Yes	No	3	1.07E+02	2005.12 (estimate)
	9.20E+01	1.49E+01					
Am-241	30	37	Yes	Yes	3	3.99E+03	2005.12 (estimate)
	6.66E-01	3.99E+03					

REGULATORS

Country: Indonesia, Republic of Reporting Year: 2005

Name	NECB
Full Name	Nuclear Energy Control Board
Division	-
City or Town	Jakarta

REGULATIONS / LAWS

Country: Indonesia, Republic of Reporting Year: 2005

Name	Act	
Title or Name	Act on Nuclear Energy	
Reference Number	No.10 year 1997	
Date Promulgated or Proclaimed	1997-04-10	Law

Name	GR-1	
Title or Name	Goverment's Regulation on Radioactive Waste Management	
Reference Number	No. 27 year: 2002	
Date Promulgated or Proclaimed	2002-05-13	Regulation

Name	GR-2	
Title or Name	Goverment's Regulation for Safety for Transportation of Radioactive Substance	
Reference Number	No. 26 Year 2002	
Date Promulgated or Proclaimed	2002-05-13	Regulation

Country Waste Profile Report for
Iran, Islamic Republic of
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:21:38

Waste Class Matrix(ces) Used/Defined

Country: Iran, Islamic Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: Iran

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
VLLW	100	0	0
LLW	100	0	0
ILW-SL	100	0	0
LILW-LL	0	100	0
HLW	0	0	100

Description: Waste classification scheme for Iran is not designated in a law or regulation but it is in the approval stage.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Iran, Islamic Republic of | Reporting Year: 2005

Reporting Group: **WMD**

Inventory Reporting Date: December 2005

Waste Matrix Used: Iran

Description: Waste Management Department

Site Name	Facility Name	Facilities Defined		
ASB	ASB		storage	
CWMB	CWMF	processing		
KRC	KSB		storage	
LA	LA			disposal

Reporting Group WMD, Site Structure: ASB

Country: Iran, Islamic Republic of Reporting Year: 2005

Full Name: Anarak Storage Building

License Holder(s) : Waste Management Dept.

The following list the waste management facilities that are located at this site.

Facility: ASB

Description	Anarak Storage Building for LLW, ILW-SL and SRS

Storage part of the "ASB" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	No	No	LLW	No	Yes
ILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity	sufficient capacity for 40 years.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ASBStorage	building	1994	No	No	No	Yes

Reporting Group WMD, Site Data: ASB

Country: Iran, Islamic Republic of Reporting Year: 2005

Full Name: Anarak Storage Building

Inventory Reporting Date: December 2005 Waste Matrix: Iran

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
ILW-SL	Storage	No	1.4	100	0	0	0	0	0	0	No
ILW-SL	Storage	Yes	6	100	0	0	0	0	0	0	No

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-90	3			No	Yes	0	1.90E+00	1990.01
	1.90E+00							
Co-60		1		No	Yes	0	1.90E+02	1975.01
		1.90E+02						
Co-60	34			No	Yes	0	1.80E+01	1975.01
	1.80E+01							
Co-60	58			Yes	No	0	2.00E+01	1975.01
	2.00E+01							
Cs-137		11		Yes	No	0	6.10E+02	1975.01
		6.10E+02						
Cs-137	1			No	Yes	0	3.70E-01	
	3.70E-01							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241		1	No	Yes	0	2.20E+01	
		2.20E+01					
Am-241	2	1	No	Yes	0	3.70E+00	
	1.50E+00	2.20E+00					

Reporting Group WMD, Site Structure: CWMB

Country: Iran, Islamic Republic of Reporting Year: 2005

Full Name: Centralized Waste Management Building

License Holder(s) : Waste Management Department(AEOI,TEHRAN,IRAN)

The following list the waste management facilities that are located at this site.

Facility: CWMF

Description	Centralized Waste Management Facility

Processing part of the "CWMF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	No	No	LLW	No	Yes
ILW-SL	No	Yes	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				

Type	treatment, conditioning
Year opened	2003

Reporting Group WMD, Site Structure: KRC

Country: Iran, Islamic Republic of

Reporting Year: 2005

Full Name: Karaj Research Center

License Holder(s) : Waste Management Dept.

The following list the waste management facilities that are located at this site.

Facility: KSB

Description	Karaj Storage Building

Storage part of the "KSB" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	Yes	No	LLW	Yes	No
ILW-SL	Yes	No	LILW-LL	No	Yes
HLW	No	No			
SRS	Yes	No			

List SRS?	Yes
Capacity	Sufficient for 40 years.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILWstore	building	2003	No	No	Yes	No
SRSstore	pit	2003	No	No	No	Yes

Reporting Group WMD, Site Structure: LA

Country: Iran, Islamic Republic of Reporting Year: 2005

Full Name: Landfill Area

License Holder(s) : Waste Management Dept.

The following list the waste management facilities that are located at this site.

Facility: LA

Description	Landfill Area

Disposal part of the "LA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	Yes	Yes	LLW	No	No
ILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	20000	Capacity -planned (m3)	100000
Depth (m)	3		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1974	
site selection		1975	
commissioning		1976	
operation		1976	

Reporting Group WMD, Site Data: LA

Country: Iran, Islamic Republic of Reporting Year: 2005

Full Name: Landfill Area

Inventory Reporting Date: December 2005 Waste Matrix: Iran

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
VLLW	Disposal	No	5990	20	0	0	80	0	0	0	Yes

REGULATORS

Country: Iran, Islamic Republic of

Reporting Year: 2005

Name	INRA
Full Name	Iranian Nuclear Regulatory Authority
Division	Nuclear Safety
City or Town	Tehran

REGULATIONS / LAWS

Country: Iran, Islamic Republic of | Reporting Year: 2005

Name	RS-RWM	
Title or Name	Regulation and standards for the radioactive waste management	
Reference Number	RCNS-CS-1	
Date Promulgated or Proclaimed	1995-01-01	Regulation

Name	BRSS	
Title or Name	BASIC RADIATION SAFETY STANDARDS	
Reference Number	NRPD-BRSS-1	
Date Promulgated or Proclaimed	1999-10-01	Regulation

Name	RPAI	
Title or Name	Radiation Protection Act of Iran	
Reference Number		
Date Promulgated or Proclaimed	1989-04-19	Law

Name	RWD	
Title or Name	Radioactive waste discharges	
Reference Number	NRPD-RWD-1	
Date Promulgated or Proclaimed	2001-12-01	Regulation

Comment #5110: Wastes that are regulated by the Regulation

Matrix Iran - LLW, VLLW from medical centers and hospitals

Name	AAEOI	
Title or Name	Act of Atomic Enegy Organization of Iran	
Reference Number	-	
Date Promulgated or Proclaimed	1974-07-01	Law

MILESTONES

Country: Iran, Islamic Republic of

Reporting Year: 2005

Start Year or Reference Year:	1975	End Year	1977
Description of Milestone			
Official foundation of WM office under safety affairs Dept. of AEOI.			

Start Year or Reference Year:	1977	End Year	1978
Description of Milestone			
Planning of WM infrastructure on the basis of 2300MW of nuclear electricity.			

Start Year or Reference Year:	1977	End Year	
Description of Milestone			
Official foundation of WM office under nuclear fuel division of AEOI.			

Start Year or Reference Year:	1978	End Year	
Description of Milestone			
Cancellation of all nuclear programms.			

Start Year or Reference Year:	1984	End Year	
Description of Milestone			
Refoundation of waste management department.			

Start Year or Reference Year:	1997	End Year	
Description of Milestone			
New efforts for development of WM infrastructure and requirements.			

Start Year or Reference Year:	1998	End Year	2002
Description of Milestone			
Direct co-operation with IAEA to obtain assistance in construction of a CWMF(Centralized waste management facility).			

Start Year or Reference Year:	2001	End Year	2002
Description of Milestone			
Planning and area survey for NS Repository.			

Start Year or Reference Year:	2001	End Year	2003
Description of Milestone			
Technical co-operation with IAEA for development of National Waste Management Strategy.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
Commisioning of centralized waste management facility.			

Start Year or Reference Year:	2003	End Year	
Description of Milestone			
Begining of a TC project with IAEA titled "Development of a reference design for near surface repository".			

Policies

Country: Iran, Islamic Republic of | Reporting Year: 2005

National Systems

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

Comment #7104: Waste Mangement Policy

WM policy of Iran has been partially stated in the document titled "Natianal Waste Management Strategy"(TC project IRA/04/033), finalized in Dec. 2003.

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

Comment #7218: NATIONAL STRATEGY

WM policy of Iran will be implemented through the national waste management strategy which has been documented as "Natianal Waste Management Strategy"(TC project IRA/04/033), finalized in Dec. 2003.

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Partially
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	No
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	No

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete

Policies

Regulatory Body Responsibility

20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Partially
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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)?	No

Disposal Facilities

Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

Policies

Country: Iran, Islamic Republic of **Disposal Facilities** Reporting Year: 2005

40	Environmental Assessment (EA)	Yes - Some
41	Environmental Impact Statement (EIS)	Yes - Some
42	Performance Assessment (PA)	No
43	Quality Assurance (QA)	Yes - Some
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	No
61	waste minimization	No
62	waste storage	No
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

	Foreign	(Yes;No)

108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	No
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	Yes
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

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

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

Country Waste Profile Report for

Ireland

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:21:54

Waste Class Matrix(ces) Used/Defined

Country: Ireland Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #143: Disused source inventory

Ireland has no nuclear power reactors or research reactors and no uranium mining or fuel fabrication facilities. The generation of radioactive waste is therefore on a very small scale when compared with countries which have or had such facilities, being limited to radioactive waste arising from the use of radioactive materials in medicine, industry and research/teaching. Sealed Radioactive sources are licensed by the regulator, the Radiological Protection Institute of Ireland, on the understanding that they will be returned to the supplier when no longer required. Unsealed radioactive waste must be held in storage until the radioactive content decays to below values where disposal is permitted. Normally radioactive waste is stored on the premises where the practice, which generated it, is located. There is no central radioactive waste repository in Ireland.

Storage of all radioactive waste is subject to strict control by licence and inspection by the RPII.

The sealed radioactive sources listed in the inventories below arise from sources which were imported prior to the introduction of the take-back licencing requirement, and sources where, for what ever reason, the take-back agreement has not been honoured

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

Undefined

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed				
processed				

Groups Overview

Country: Ireland Reporting Year: 2005

Reporting Group: **Education**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: The term Education refers to 13 sites located throughout the country, such as universities who are involved with education and research and who are licenced to hold disused radioactive materials.

Site Name	Facility Name	Facilities Defined		
Education	Education		storage	

Reporting Group: **Industry**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: This group represents the disused sources held at industrial premises in Ireland.

Site Name	Facility Name	Facilities Defined		
Industry	Industry		storage	

Reporting Group: **Medical**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: The term Medical refers to 12 licensed hospitals located throughout the country who hold disused radioactive sources.

Site Name	Facility Name	Facilities Defined		
Medical	Medical		storage	

Reporting Group: **State Labs**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: The term refers to 11 licensees, such as State run laboratories, located thoughout the country and who hold disused radioactive sources.

Site Name	Facility Name	Facilities Defined		
State Labs	State Labs		storage	

Reporting Group Education, Site Structure: Education

Country: Ireland Reporting Year: 2005

Full Name:

Location: The term Education refers to 13 sites located throughout the country, such as universities who are involved with education and research and who are licenced to hold disused radioactive materials.

License Holder(s) : Third Level Institutes of Education

The following list the waste management facilities that are located at this site.

Facility: Education

Description	Third level educational institutes storing sealed sources

Storage part of the "Education" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRS	various	0	No	No	No	Yes
Type comment:	collection of facilities					

Reporting Group Education, Site Data: Education

Country: Ireland Reporting Year: 2005

Full Name:

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Co-60		1		Yes	No	4	1.11E+01	
		1.11E+01						
Cs-137	11			Yes	No	5	9.15E-02	
	9.15E-02							
Sr-90	30			Yes	No	5	3.24E-03	
	3.24E-03							
Sr-90	1	2		Yes	No	4	1.52E+02	
	7.40E-01	1.52E+02						
Cs-137		1		Yes	No	4	1.37E+01	
		1.37E+01						
Cd-109	1			Yes	No	5	1.10E-01	
	1.10E-01							
Co-60	24			Yes	No	4	2.15E-01	
	2.15E-01							
Co-57	9			Yes	No	5	4.50E+00	
	4.50E+00							
Fe-55	1			Yes	No	5	3.70E-01	
	3.70E-01							
H-3		2		Yes	No	5	3.70E+01	
		3.70E+01						

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Th-232	3		Yes	No	5	1.00E-04	
	1.00E-04						
Sm-151	1	2	Yes	No	4	7.77E+00	
	3.70E-01	7.40E+00					
Ra-226	12		Yes	No	5	4.00E-02	
	4.00E-02						
Ni-63	1		Yes	No	5	3.70E-01	
	3.70E-01						
Am-241	17		Yes	No	5	6.00E-03	
	6.00E-03						

Reporting Group Industry, Site Structure: Industry

Country: Ireland Reporting Year: 2005

Full Name:

Location: The term refers to the several industrial licensees who hold disused sources.

License Holder(s) : Various industrial companies

The following list the waste management facilities that are located at this site.

Facility: Industry

Description	This term refers to the disused sources held by industrial licensees in Ireland

Storage part of the "Industry" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	Yes
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRS	various	0	No	No	No	Yes
Type comment:	collection of facilities					

Reporting Group Industry, Site Data: Industry

Country: Ireland Reporting Year: 2005

Full Name:

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cm-244	1 3.70E+00			Yes	No	4	3.70E+00	
Co-60	1 3.70E-01			Yes	No	5	3.70E-01	
Ir-192	1 1.00E-01			Yes	No	4	1.00E-01	
Na-22	1 3.70E-04			Yes	No	5	3.70E-04	
Sr-90	3 3.74E-01			Yes	No	5	3.74E-01	
Hg-203	1 1.50E-03			Yes	No	5	1.50E-03	
Cf-252	1 4.00E-05			Yes	No	5	4.00E-05	
Cs-137		1 1.11E+02		Yes	No	3	1.11E+02	
Cs-137	16 3.60E-02			Yes	No	5	3.60E-02	
Po-210	2 2.00E-02			Yes	No	5	2.00E-02	
Tl-204	8 4.94E-01			Yes	No	4	4.94E-01	
H-3		300 2.77E+05		Yes	No	4	2.77E+05	
Pm-147	7 1.00E-01			Yes	No	4	1.00E-01	
Sr-90	21 1.31E+01			Yes	No	4	1.31E+01	
Co-60	1 3.70E+00			Yes	No	4	3.70E+00	
Kr-85		6 5.58E+01		Yes	No	4	5.58E+01	
Cs-137	28 3.11E+01	3 3.52E+01		Yes	No	4	6.63E+01	

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241	6 1.20E-02		Yes	No	5	1.20E-02	

Reporting Group Industry, Site Data: Industry

Country: Ireland Reporting Year: 2005

Am-241		1	Yes	No	3	1.85E+01	
		1.85E+01					
Ra-226	2		Yes	No	5	5.40E-02	
	5.40E-02						
Pu-238	2		Yes	No	5	1.48E+00	
	1.48E+00						
Ni-63	28		Yes	No	5	1.04E+01	
	1.04E+01						
Am-241	42	4	Yes	No	4	5.97E+01	
	4.30E+01	1.67E+01					

Comment #7192: Neutron generators

Data for Am-241sources includes 8 Am-241/Be (cat 4) sources of total activity 12.36 GBq plus one source(cat 3) of 18.5GBq

Reporting Group Medical, Site Structure: Medical

Country: Ireland Reporting Year: 2005

Full Name:

Location: The term Medical refers to 12 licensed hospitals located throughout the country who hold disused radioactive sources.

License Holder(s) : Hospitals

The following list the waste management facilities that are located at this site.

Facility: Medical

Description	12 Hospitals storing sources

Storage part of the "Medical" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRS	various	0	No	No	No	Yes
Type comment:	collection of facilities					

Reporting Group Medical, Site Data: Medical

Country: Ireland Reporting Year: 2005

Full Name:

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Ge-68	4			Yes	No	5	1.60E+00	
	1.60E+00							
Gd-153		4		Yes	No	4	1.41E+02	
		1.41E+02						
Cs-137	17			Yes	No	5	1.00E-01	
	1.00E-01							
Co-57	55			Yes	No	5	7.24E+00	
	7.24E+00							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	8		Yes	No	5	4.90E-02	
	4.90E-02						
Ni-63	1		Yes	No	5	5.55E-01	
	5.55E-01						
Pu-238		1	Yes	No	3	9.25E+01	
		9.25E+01					
Am-241	3		Yes	No	4	4.44E-01	
	4.44E-01						

Reporting Group State Labs, Site Structure: State Labs

Country: Ireland Reporting Year: 2005

Full Name:

Location: The term refers to 11 licensees, such as State run laboratories, located thoughout the country and who hold disused radioactive sources.

License Holder(s) : State Labs and agencies

The following list the waste management facilities that are located at this site.

Facility: State Labs

Description	State laboratories and agencies that are storing a disused source(s)

Storage part of the "State Labs" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	Yes
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRS	various	0	No	No	No	Yes
Type comment:	collection of facilities					

Reporting Group State Labs, Site Data: State Labs

Country: Ireland Reporting Year: 2005

Full Name:

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Ba-133	1			Yes	No	5	3.30E-01	
	3.30E-01							
Cs-137	5			Yes	No	5	1.06E-02	
	1.06E-02							
Sr-90	2	1		Yes	No	4	7.59E+00	
	1.85E-01	7.40E+00						
Tl-204	1			Yes	No	5	7.00E-03	
	7.00E-03							
H-3		1		Yes	No	5	6.48E+00	
		6.48E+00						
Fe-55	1			Yes	No	5	1.67E+00	
	1.67E+00							
Cd-109	1			Yes	No	5	1.85E-01	
	1.85E-01							
Cs-137	9			Yes	No	4	1.08E+01	
	1.08E+01							
Co-60	130			Yes	Yes	5	2.39E+01	
	2.39E+01							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241	7	2	Yes	No	4	3.03E+01	
	8.14E+00	2.22E+01					
U-238	3		Yes	No	5	5.55E-01	
	5.55E-01						
Ra-226	890		Yes	Yes	4	6.70E-02	
	6.70E-02						
Ni-63	7		Yes	No	5	2.97E+00	
	2.97E+00						
C-14	75		Yes	No	5	1.39E-01	
	1.39E-01						
Cl-36	1		Yes	No	5	6.00E-05	
	6.00E-05						

Comment #7191: Neutron generators

Am-241 sources of < 4GBq, include 5 Am-241/Be sources of total activity 8.14GBq

REGULATORS

Country: Ireland Reporting Year: 2005

Name	RPII
Full Name	Radiological Protection Institute of Ireland
Division	Regulatory Service
City or Town	Dublin

Country Waste Profile Report for

Italy

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:22:17

Waste Class Matrix(ces) Used/Defined

Country: Italy (Italian Republic) Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: APAT GT26

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
1st Category	100	0	0
2nd Category	100	0	0
3rd Category	0	80	20

Description: Long lived wastes not included in category I and II; high level wastes from reprocessing of spent fuel and alpha bearing wastes from the fuel cycle and R&D activities

Attachment #1152: Technical Guide APAT n°26

File name: TECHNICAL GUIDE N 26.doc

File type: MS Office Document

Member State's Reference # APAT TG 26

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

Undefined

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed				
processed				

Groups Overview

Country: Italy (Italian Republic) Reporting Year: 2005

Reporting Group: **CCR Ispra**

Inventory Reporting Date: December 2005

Waste Matrix Used: APAT GT26

Description: Joint Research Center Ispra

Site Name	Facility Name	Facilities Defined		
CCR Ispra	storage		storage	

Reporting Group: **FCF**

Inventory Reporting Date: December 2005

Waste Matrix Used: APAT GT26

Description: Fuel Cycle Facilities

Site Name	Facility Name	Facilities Defined		
Avogadro	Storage		storage	
Eurex	Storage		storage	
FN	Storage		storage	
IPU	Storage		storage	
ITREC	SIRTE-MOWA	processing	storage	
	Storage		storage	
Opec	Storage		storage	

Reporting Group: **NPPs**

Inventory Reporting Date: December 2005

Waste Matrix Used: APAT GT26

Description: In Italy operated 4 NPPs owned by the national electricity company ENEL. After the shut down due to a referendum on 1987, on 1999 all the ENEL’s liabilities and assets connected to nuclear power have been assigned to a newly established company, named SOGIN (Società Gestione Impianti Nucleari).
SOGIN has the responsibility of waste management and complete decommissioning of all the NPPs.

Site Name	Facility Name	Facilities Defined		
Caorso	LILW store		storage	
	Pool		storage	
Garigliano	LILW store		storage	
Latina	LILW store		storage	
Trino	LILW store		storage	
	Pool		storage	

Groups Overview

Country: Italy (Italian Republic) Reporting Year: 2005

Reporting Group: **Nucleco**

Inventory Reporting Date: December 2005

Waste Matrix Used: APAT GT26

Description: Radioactive waste collection, treatment and storage facility

Site Name	Facility Name	Facilities Defined		
Nucleco	Process	processing		
	Storage		storage	

Reporting Group: **R&IRW**

Inventory Reporting Date: December 2005

Waste Matrix Used: APAT GT26

Description: Research and Institutional radioactive waste facilities

Site Name	Facility Name	Facilities Defined		
Various	Storage		storage	

Reporting Group CCR Ispra, Site Structure: CCR Ispra

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Euratom Joint Research Center Ispra

License Holder(s) : Euratom

The following list the waste management facilities that are located at this site.

Facility: storage

Description	several facilities

Storage part of the "storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	No
3rd Category	Yes	No			
SRS	No	No			

List SRS?	No
Capacity	sufficient for all waste

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
various	various	1970	No	No	No	No
Type comment:	radioactive waste are kept in storage, waiting for the final treatment, in different facilities (buildings, trench, well etc ...)					

Reporting Group CCR Ispra, Site Data: CCR Ispra

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Euratom Joint Research Center Ispra

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	1796	0	0	0	100	0	0	0	Yes
3rd Category	Storage	No	762	0	0	0	100	0	0	0	Yes

Reporting Group FCF, Site Structure: Avogadro

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Deposito Avogadro

License Holder(s) : FIAT AVIO

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	No	No			
SRS	No	No			

List SRS?	No
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1980	No	No	No	No
Pool	pool	1980	No	No	No	No

Reporting Group FCF, Site Data: Avogadro

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Deposito Avogadro

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	47.7	100	0	0	0	0	0	0	Yes

Reporting Group FCF, Site Structure: Eurex

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Enriched Uranium Extraction plant

License Holder(s) : SOGIN

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	Yes	Yes			
SRS	No	No			

List SRS?	No
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1980	No	No	No	No
Tanks	tank (stainless steel)	1970	No	No	No	No

Reporting Group FCF, Site Data: Eurex

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Enriched Uranium Extraction plant

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage Liquid	No	144.8	0	0	100	0	0	0	0	Yes
2nd Category	Storage Solid	No	994.3	0	0	100	0	0	0	0	Yes
2nd Category	Storage Solid	Yes	169.7	0	0	100	0	0	0	0	Yes
3rd Category	Storage Liquid	No	113.3	0	0	100	0	0	0	0	Yes
3rd Category	Storage Solid	No	280	0	0	100	0	0	0	0	Yes
3rd Category	Storage Solid	Yes	21	0	0	100	0	0	0	0	Yes

Reporting Group FCF, Site Structure: FN

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Fabbricazioni Nucleari

License Holder(s) : Sogin

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	No	No

Reporting Group FCF, Site Data: FN

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Fabbricazioni Nucleari

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	55.2	0	100	0	0	0	0	0	Yes
2nd Category	Storage	Yes	232.2	0	100	0	0	0	0	0	Yes

Reporting Group FCF, Site Structure: IPU

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Impianto Plutonio

License Holder(s) : Sogin

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	Yes
3rd Category	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	No	No

Reporting Group FCF, Site Data: IPU

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Impianto Plutonio

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
3rd Category	Storage	No	98	0	100	0	0	0	0	0	Yes

Reporting Group FCF, Site Structure: ITREC

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Fuel elements treatment and fabrication plant

License Holder(s) : Sogin

The following list the waste management facilities that are located at this site.

Facility: SIRTE-MOWA

Description	Cementation facility

Processing part of the "SIRTE-MOWA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	No
3rd Category	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1999

Storage part of the "SIRTE-MOWA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	Yes	Yes	2nd Category	Yes	Yes
3rd Category	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	No	No

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	Yes	Yes	2nd Category	Yes	Yes
3rd Category	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storgae	building	1980	No	No	No	No

Reporting Group FCF, Site Data: ITREC

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Fuel elements treatment and fabrication plant

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
1st Category	Storage	No	2223.1	0	0	0	0	0	100	0	Yes
2nd Category	Storage	No	2941.9	0	0	100	0	0	0	0	Yes
2nd Category	Storage	Yes	693.9	0	0	100	0	0	0	0	Yes
3rd Category	Storage	No	10.68	0	0	100	0	0	0	0	Yes
3rd Category	Storage	Yes	148.9	0	0	100	0	0	0	0	Yes

Processing - Conditioning method(s)

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

Reporting Group FCF, Site Structure: Opec

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Hot Operation Laboratory

License Holder(s) : Sogin

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	Yes
3rd Category	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1970	No	No	No	No

Reporting Group FCF, Site Data: Opec

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Hot Operation Laboratory

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
3rd Category	Storage	No	4.2	0	0	0	100	0	0	0	Yes

Reporting Group NPPs, Site Structure: Caorso

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Nucleare Caorso

License Holder(s) : SOGIN

The following list the waste management facilities that are located at this site.

Facility: LILW store

Description	Various storage facilities

Storage part of the "LILW store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ERS	building	1980	No	No	No	No

Facility: Pool

Description	Reactor pool

Storage part of the "Pool" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	No
3rd Category	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
pool	pool	1980	No	No	No	No

Reporting Group NPPs, Site Data: Caorso

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Nucleare Caorso

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	1868.8	100	0	0	0	0	0	0	Yes
2nd Category	Storage	Yes	424.8	100	0	0	0	0	0	0	Yes

Reporting Group NPPs, Site Structure: Garigliano

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare del Garigliano

License Holder(s) : SOGIN

The following list the waste management facilities that are located at this site.

Facility: LILW store

Description	LILW storage facilities

Storage part of the "LILW store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	No	No			
SRS	No	No			

List SRS?	No
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	No	No

Reporting Group NPPs, Site Data: Garigliano

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare del Garigliano

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	1108.4	80	0	0	0	0	20	0	Yes
2nd Category	Storage	Yes	1516.2	80	0	0	0	0	20	0	Yes

Reporting Group NPPs, Site Structure: Latina

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare di Latina

License Holder(s) : SOGIN

The following list the waste management facilities that are located at this site.

Facility: LILW store

Description	LILW storage facilities

Storage part of the "LILW store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	No	No

Reporting Group NPPs, Site Data: Latina

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare di Latina

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	891.5	80	0	0	0	0	20	0	Yes
2nd Category	Storage	Yes	309.5	80	0	0	0	0	20	0	Yes
3rd Category	Storage	No	12.1	100	0	0	0	0	0	0	Yes

Reporting Group NPPs, Site Structure: Trino

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare E.Fermi

License Holder(s) : SOGIN

The following list the waste management facilities that are located at this site.

Facility: LILW store

Description	LILW storage facilities

Storage part of the "LILW store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	Yes	Yes
3rd Category	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Store	building	1975	No	No	No	No

Facility: Pool

Description	Reactor pool

Storage part of the "Pool" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	No
3rd Category	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Pool	pool	0	No	No	No	No

Reporting Group NPPs, Site Data: Trino

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Centrale Elettronucleare E.Fermi

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
2nd Category	Storage	No	252.1	90	0	0	0	0	10	0	Yes
2nd Category	Storage	Yes	716.6	100	0	0	0	0	0	0	Yes

Reporting Group Nucleco, Site Structure: Nucleco

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Nuclear Ecology

License Holder(s) : ENEA

The following list the waste management facilities that are located at this site.

Facility: Process

Description	

Processing part of the "Process" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	No	No	2nd Category	No	No
3rd Category	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1985

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	Yes	Yes	2nd Category	Yes	Yes
3rd Category	No	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Store	building	1985	No	No	No	No

Reporting Group Nucleco, Site Data: Nucleco

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name: Nuclear Ecology

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
1st Category	Storage	No	1677	0	0	0	100	0	0	0	No
2nd Category	Storage	No	162.6	0	70	0	30	0	0	0	Yes
2nd Category	Storage	Yes	2611.4	0	70	0	30	0	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Grouting			same	

Reporting Group R&IRW, Site Structure: Various

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name:

License Holder(s) : different operators

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
1st Category	Yes	Yes	2nd Category	Yes	Yes
3rd Category	Yes	Yes			
SRS	No	No			

List SRS?	No
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Store	building	1980	No	No	No	No

Reporting Group R&IRW, Site Data: Various

Country: Italy (Italian Republic) Reporting Year: 2005

Full Name:

Inventory Reporting Date: December 2005 Waste Matrix: APAT GT26

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
1st Category	Storage	No	3277.1	0	0	0	100	0	0	0	Yes
2nd Category	Storage	No	1452.1	0	0	0	100	0	0	0	Yes
2nd Category	Storage	Yes	110	0	0	0	100	0	0	0	Yes
3rd Category	Storage	No	20.1	0	0	0	100	0	0	0	Yes
3rd Category	Storage	Yes	140	0	0	0	100	0	0	0	Yes

REGULATORS

Country: Italy (Italian Republic) Reporting Year: 2005

Name	APAT
Full Name	Agenzia per la Protezione dell'Ambiente e per i Servizi Tecnici Agency for the Environmental Protection and for the Technical Services
Division	Nuclear and Industrial Risk Department
City or Town	Rome

REGULATIONS / LAWS

Country: Italy (Italian Republic) Reporting Year: 2005

Name	Law n°1860	
Title or Name	Law no. 1860 of 31 December 1962	
Reference Number	Law no. 1860 of 31 December 1962	
Date Promulgated or Proclaimed	1962-12-31	Law

Name	LD n°230	
Title or Name	Legislative Decree no. 230 of 17 March 1995	
Reference Number	Legislative Decree no. 230 of 17 March 1995	
Date Promulgated or Proclaimed	1995-03-17	Law

Name	LD n°241	
Title or Name	Legislative Decree no. 241 of 26th May 2000	
Reference Number	Legislative Decree no. 241 of 26th May 2000	
Date Promulgated or Proclaimed	2000-05-26	Law

Policies

Country: Italy (Italian Republic) | Reporting Year: 2005

National Systems

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

Comment #7364: Policy on Radioactive waste management

Strategic guidelines for the management of the past nuclear activities and in particular for the radioactive waste management and decommissioning of the nuclear installations are provided in a Ministerial Decree of 1999.

The Decree established the procedures for the immediate dismantling of the 4 NPPs and fuel cycle facilities and for the realization of a national LLW repository and of a long term storage facility for the HLW and SF.

The growing international concern on terrorist activities has emphasized the risk for the unresolved solution of spent fuel and radioactive waste disposal management, consequently Legislative Decree has been approved on december 2003. The LD n° 368 establishes the procedures for the identification and operation by 2008 of a repository for HLW and SF.

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

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	No
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete

Policies

Country: Italy (Italian Republic) **National Systems** Reporting Year: 2005

16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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

If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below

Attachment #1154: site and solid material release in Italy

File name: Site and materials release in Italy.doc

File type: MS Office Document

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	not answered
41	Environmental Impact Statement (EIS)	not answered
42	Performance Assessment (PA)	not answered
43	Quality Assurance (QA)	not answered
44	Safety Assessment (SA)	not answered

Comment #7608: Disposal facilities

In Italy, there is not yet a LLW disposal facility and the radioactive waste from NPPs and from experimental fuel cycle facilities is still stored at their points of origin. Radioactive waste from medical, industry and research activities is collected for temporary storage by private operators. Most of this waste is stored as produced, waiting for treatment and/or conditioning. According to the present strategy, a national site for LLW disposal and for the HLW long term storage (including spent fuel) is foreseen by the end of 2008.

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

Comment #7610: Policy on Radioactive waste management

Even if disposal facilities are not available, APAT Technical Guide n°26 gives Waste Acceptance Criteria for LLW conditioning that are considered for a conceptual near surface disposal facility.

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)

Does your country have written policies or written procedures for the following:

60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes

63	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)	Yes
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

Attachment #1153: This document describes SRS regulation in Italy and includes information about the total activity of SRS that are stored at various sites throughout Italy.

File name: Spent Sources Regulation in ITALY.doc

File type: MS Office Document

	Procedures	(Yes;No)
78	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

Policies

Country: Italy (Italian Republic) **Spent SRS** Reporting Year: 2005

	Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	No
84	Do any agreements include suppliers that are outside of your Country?	No

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

Import-Export

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

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

Liquid HLW

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

	Processing	(Yes - All;Yes - Some;No)
94	If your Country has high-level liquid wastes in storage, are there documented plans in place to process these liquids?	Yes - Some

	Timeframe	(Yes - All;Yes - Some;No)
95	If your Country has high-level liquid wastes in storage, are there plans to have this waste be processed within a specified time frame?	Yes - Some
96	If the answer to the previous question is Yes, what year is this processing planned to be completed (format = YYYY)	2009

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for

Japan

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 17:21:03

Waste Class Matrix(ces) Used/Defined

Country: Japan Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: JP

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
HLW	0	0	100
LLW	100	0	0

Description: Radioactive waste is classified into two categories, namely HLW (liquid waste generated from spent fuel reprocessing and its vitrified package) and other LLW. Reported % for LLW is only applicable to disposal packages and will be updated in a future submission. Please refer to the comment that is included for this matrix.

Comment #12115: Waste classification in Japan

Radioactive waste other than HLW is usually called as LLW (ie. based on exclusion). Therefore, LLW includes items ranging from very low activity waste from hospitals and universities up to highly active waste such as ion exchange resins from reactor water clean up systems, irradiated reactor core components and some LLW containing transuranic nuclides (so-called TRU waste) which is to be disposed of geologically. The LLW has been sub-classified according to origin (differing radionuclide composition) and level of radioactivity in the development of waste management policy. Waste origin information is supplied according to the %distribution in Waste Data component of the NEWMDB,

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Waste Class Matrix: DISPOSAL

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Geological	0	78	22
Sub-surface with EBS	0	100	0
Near-surface with EBS	100	0	0
Near-surface without EBS	100	0	0

Description: Disposal-based classification from the Framework for Nuclear Energy Policy (October 11, 2005) decided by Japan Atomic Energy Commission (AEC). Clearance may be regarded but omitted here.
% of “Geological” class is based on future disposal package generation (HLW glass packages and some waste from reprocessing and MOX fuel fabrication those are subjected to the geological disposal). % of “Sub-surface with EBS” class (all LILW-LL) is ad-hoc and controversial.

Comment #12127: Disposal-based classification

In the Framework for Nuclear Energy Policy (October 11, 2005) decided by Japan Atomic Energy Commission (AEC), radioactive waste is grouped into two categories: a) radioactive wastes for geological disposal, and b) radioactive wastes for disposal with institutional control. Methods of disposal with institutional control include: b-1) near-surface disposal without engineered barriers, b-2) near-surface disposal with engineered barriers, and b-3) sub-surface disposal with engineered barriers.

The Framework for Nuclear Energy Policy (October 11, 2005, AEC) is available form:
http://aec.jst.go.jp/jicst/NC/tyoki/taikou/kettei/eng_ver.pdf
(see §2-3. Treatment and Disposal of Radioactive Waste)

Waste Class Matrix(ces) Used/Defined

Country: Japan Reporting Year: 2005

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	X	X	X	
processed				X

Reporting Group disposal, Site Structure: JAEA Tokai

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Tokai Research and Development Center

Location: Tokai Vil., Ibaraki Pref.

License Holder(s) : Japan Atomic Energy Agency (JAEA)

The following list the waste management facilities that are located at this site.

Facility: VLLW

Description	Waste Disposal facility (Waste burial test site in the JPDR dismantling project)

Disposal part of the "VLLW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Geological	No	No	Sub-surface with EBS	No	No
Near-surface with EBS	No	No	Near-surface without EBS	Yes	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	2520	Capacity -planned (m3)	2520
Depth (m)	2.5 - 6.0		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1981	
commissioning			1995
operation		1995	1996
closure		1996	
institutional control		1997	2027

Reporting Group disposal, Site Data: JAEA Tokai

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Tokai Research and Development Center

Inventory Reporting Date: March 2006 Waste Matrix: DISPOSAL

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Near-surface without EBS	Disposal	Yes	1670	0	0	0	100	0	0	0	No

Comment #12177: Disposed Waste

Note: 1,670 ton of waste disposed (no m³ value is available).
Regard to the JPDR dismantling project, a total of 24,400 tons of waste, including 3,340 tons of radioactive waste, was produced from all dismantling activities. The extremely low level concrete waste (1,670 tons, which was 6.8% of the total waste) was disposed in a nearby surface burial location.

Reporting Group disposal, Site Structure: NUMO

Country: Japan | Reporting Year: 2005

Full Name:	(To Be Determined) a future site for the HLW repository to be developed by the Nuclear Waste Management Organization of Japan (NUMO).
Location:	site not selected
License Holder(s) :	not licensed (in site selection phase for the HLW repository; NUMO is a disposal implementing entity)

The following list the waste management facilities that are located at this site.

Facility: HLW

Description	Final Disposal Facility of Vitrified HLW (in Site Selection Phase)

Disposal part of the "HLW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Geological	No	Yes	Sub-surface with EBS	No	No
Near-surface with EBS	No	No	Near-surface without EBS	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	6000
Depth (m)	> 300		
Host medium	unknown (site not selected)		

Phase	Estimate	Start Year	End Year
site selection	Yes	2002	2027
construction	Yes	2025	
operation	Yes	2035	

Comment #12191: Capacity - planned:

The capacity of a final disposal facility is not less than 40,000 canisters.
«Program for Final Disposal of the Specified Radioactive Waste, cabinet decision, October 28, 2005» - This program shall be provided every 5 years by the Minsister of METI pursuant to the article 4 of the Specified Radioactive Waste Final Disposal Act.

Capacity value in m3 unit is not available, however tentatively reported on the assumption such that a canister volume is 150L in average. (JAEA Toaki:120L, JNFL: 170L)

Comment #12192: Depth:

The Specified Radioactive Waste is to be disposed of at the depth specifed by the Cabinet Order not less than 300 meter under the ground in geological formations.
«Article 2 of the Specified Radioactive Waste Final Disposal Act»

Comment #12193: Phase:

A repository site is to be selected via stepwise procedures pursuant to the Specified Radioactive Waste Final Disposal Act.
• Selection of Preliminary Investigation Areas (PIAs)
• Selection of Detailed Investigation Areas (DIAs) 2009~2013
• Selection of a repository site (2023~2027)

• Design of the repository and licensing
• Start of construction (around 2025)
• Start of operations (2033~2037)

Reporting Group disposal, Site Structure: Rokkasho

Country: Japan Reporting Year: 2005

Full Name: JNFL ::
Low-Level Radioactive Waste Disposal Center

Location: Rokkasho Vil., Aomori Pref.

License Holder(s) : Japan Nuclear Fuel Limited (JNFL)

Comment #12156: LLW Disposal Center

Approved for a total capacity of 80,000 m³, the Low-Level Radioactive Waste Disposal Center has now its No.1 and No.2 disposal facility. The ultimate capacity is planned to be 600,000 m³.

The following list the waste management facilities that are located at this site.

Facility: LLWDC-1

Description	Low-Level Radioactive Waste Disposal Center; No.1 Disposal facility

Disposal part of the "LLWDC-1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Geological	No	No	Sub-surface with EBS	No	No
Near-surface with EBS	Yes	Yes	Near-surface without EBS	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	30720	Capacity -planned (m3)	40000
Depth (m)	6 - 12		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1982	1985
site selection		1984	1985
design		1985	1990
construction		1990	2027
commissioning		1988	1990
operation		1992	2027
closure		2027	
institutional control		2027	2327

Comment #12157: Disposal Facility LLWDC-1

Capacity existing: 153,600 drums (=5,120x5x6)
Capacity planned: 200,000 drums

Reporting Group disposal, Site Structure: Rokkasho

Country: Japan Reporting Year: 2005

Facility: LLWDC-2

Description	Low-Level Radioactive Waste Disposal Center; No.2 Disposal facility

Disposal part of the "LLWDC-2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Geological	No	No	Sub-surface with EBS	No	No
Near-surface with EBS	Yes	Yes	Near-surface without EBS	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	10368	Capacity -planned (m3)	40000
Depth (m)	11 - 18		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1992	1993
site selection		1984	1985
design		1993	1998
construction		1998	2030
commissioning		1997	1998
operation		2000	2030
closure		2030	
institutional control		2030	2330

Comment #12158: Disposal Facility LLWDC-2

Capacity existing: 51,840 drums (=12,960x2x2)
Capacity planned: 200,000 drums

Reporting Group disposal, Site Data: Rokkasho

Country: Japan Reporting Year: 2005

Full Name: JNFL ::
Low-Level Radioactive Waste Disposal Center

Inventory Reporting Date: March 2006 Waste Matrix: DISPOSAL

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Near-surface with EBS	Disposal LLWDC-1	Yes	27309.4	100	0	0	0	0	0	0	No
Near-surface with EBS	Disposal LLWDC-2	Yes	9502.4	100	0	0	0	0	0	0	No

Comment #12178: Waste Inventory in JNFL::LLWDC

Total 184,059 drums have disposed of at March 31, 2006.
- 136,547 drums (200L equivalent) in No.1 Disposal Facility
- 45,512 drums (200L equivalent) in No.2 Disposal Facility

Note: Since the start of the disposal operation in LLWDC, 185,251 drums have received from NPP sites, of which 1,192 drums are pending prior to disposed of at the reporting date and those volume will be reported at the next NEWMDB cycle.

Reporting Group JAEA, Site Structure: Mutsu

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Mutsu Establishment

Location: Mutsu City, Aomori Pref.

License Holder(s) : Japan Atomic Energy Agency (JAEA)

Comment #12171: Nuclear Ship "Mutsu"

The reactor of the decommissioned Nuclear Ship "Mutsu" has been safely stored in the Mutsu Science Museum (located at Sekinahama), and is now opened to the public.
Dismantled equipments and radioactive waste are also stored in this site.

The following list the waste management facilities that are located at this site.

Facility: Sekinehama

Description	Reactor Facility of the 1st Nuclear Ship "Mutsu"; Dismantling completed in 1995. (waste storage facilities located af Sekinehama)

Processing part of the "Sekinehama" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	, Phased

Storage part of the "Sekinehama" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	1,768 drums (353.6 m³) solid waste				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
R&RW/B	building	1988	No	No	No	No
DE/B	building	1995	No	No	No	No
RR/B	building	1996	Yes	Yes	No	No

Comment #12114: Storage Units in JAEA::Mutsu

•F&RW/B: Fuel and Radioactive Waste handling Bldg.
•DE/B: Dismantled Equipments storage Bldg.
•RR/B: Reactor Room storage Bldg.

‡: The capacity dose not include 880 m³ of dismantled reactor room displayed in the RR/B which is a part of the Science Museum.

Reporting Group JAEA, Site Data: Mutsu

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Mutsu Establishment

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	200	0	0	0	100	0	0	0	No

Comment #12180: Waste Inventory in JAEA::Mutsu

• 1,046 drums (200L equivalent).
excluded waste volume of the dismantled Reactor (880 m³) in the Mutsu Science Museum
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			intermittent	
Ion Exchange			intermittent	

Reporting Group JAEA, Site Structure: Ningyo

Country: Japan Reporting Year: 2005

Full Name:	JAEA:: Ningyo-toge Environmental Engineering Center
Location:	Kagamino Town, Okayama Pref.
License Holder(s) :	Japan Atomic Energy Agency (JAEA)

The following list the waste management facilities that are located at this site.

Facility: UEP(R&D)

Description	R&D plant of uranium refining, conversion and enrichment. Front-end technologies of the nuclear fuel cycle had previously developed in this center. The facilities used for these activities are being dismantled.

Processing part of the "UEP(R&D)" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	, Phased

Storage part of the "UEP(R&D)" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	16,879 drums (3,376 m³)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
W/B x14	building	1979	No	No	No	No
Oil W/B x2	building	1980	No	No	No	No
DP W/B	building	1985	No	No	No	No

Comment #12120: Storage Units in JAEA::Ningyo-toge EEC

• W/B: Waste storage Bldg.
•Oil W/B: Oil Waste storage Bldg.
•DP W/B: Demonstration Plant Waste storage Bldg.

Reporting Group JAEA, Site Data: Ningyo

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Ningyo-toge Environmental Engineering Center

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	2960	0	100	0	0	0	0	0	No

Comment #12181: Waste Inventory in JAEA::Ningyo EEC

• 14,769 drums (200L equivalent).
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination		Yes		
Incineration			same	

Reporting Group JAEA, Site Structure: Oarai

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Oarai Research and Development Center

Location: Oarai Town, Ibaraki Pref.

License Holder(s) : Japan Atomic Energy Agency (JAEA)

The following list the waste management facilities that are located at this site.

Facility: RWM

Description	Radioactive Waste Management facility; Waste processing and storage of generated from both in-site and other generator’s sites have been carried out in this facility.

Processing part of the "RWM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "RWM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	42,795 drums (8,559 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS-I	building	1972	No	No	No	No
SWS-alpha	building	1975	No	No	No	No
SWS-II	building	1979	No	No	No	No
SWS-III	building	1989	No	Yes	No	No
SWS-IV	building	2002	No	No	No	No

Comment #12123: Storage Units in JAEA::Oarai::RWM

•SWS: Solid Waste Storage bldg.

Reporting Group JAEA, Site Data: Oarai

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Oarai Research and Development Center

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	5440	0	0	11.4	88.6	0	0	0	Yes

Comment #12184: Distribution% estimation of LLW of JAEA::Oarai

Waste volume used for distribution% of RP (reprocessing) estimation includes those are similar in radioactive nuclide composition (especially TRU).

Comment #12185: Waste Inventory in JAEA::Oarai

Total LLW: 27,200 drums;
•RP: 3,100 drums (11.4%)
•NA (nuclear application): 24,100 drums (88.6%)

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction			same	
Evaporation			same	
Incineration			same	

Processing - Conditioning method(s)

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

Reporting Group JAEA, Site Structure: Tokai

Country: Japan | Reporting Year: 2005

Full Name: JAEA::
Tokai Research and Development Center
- Nuclear Fuel Cycle Engineering Laboratories
- Nuclear Science Research Institute

Location: Tokai Vil., Ibaraki Pref.

License Holder(s) : Japan Atomic Energy Agency (JAEA)

Comment #12169: JAEA Tokai R&D Center

The Tokai R&D Center (a NEWMDB site) consists from the NSRI and NFCEL. The NFCEL has two major centers: the Reprocessing Technology Development Center (Rep.DC), and the Plutonium Fuel Technology Development Center (Pu-Fuel DC). These centers are reported separately from NFCEL in order to avoid complexity in storage units reporting (waste storage part of each facility).

The following list the waste management facilities that are located at this site.

Facility: NFCEL

Description	NFCEL - Nuclear Fuel Cycle Engineering Laboratories

Processing part of the "NFCEL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "NFCEL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	56,400 drums (11,280 m³) for solid (UW) 762 drums (152.4 m³) for solid (CPF)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WS/B-1	building	1973	No	No	No	No
WS/B-2	building	1975	No	No	No	No
WS/B-3	building	1975	No	No	No	No
WS/B-4	building	1977	No	No	No	No
WS/B-5	building	1977	No	No	No	No
WS/B-6	building	1981	No	No	No	No
UW S/B	building	1983	No	No	No	No
UW S/B-2	building	2003	No	No	No	No
Oil U/B	building	1976	No	No	No	No
CPF	building	1979	No	No	No	No

Comment #12119: Storage Units in NFCEL

• WS/B: Waste Storage Bldg.
•UW S/B: Uranium Waste Storage Bldg.
•Oil W/B: Oil Waste Bldg. (for uranium contaminated oil)

Reporting Group JAEA, Site Structure: Tokai

Country: Japan Reporting Year: 2005

•CPF: Chemical Processing Facility

Facility: NSRI

Description	NSRI - Nuclear Science Research Institute Research reactors, accelerators and laboratories; Treatment and storage of radioactive wastes originated from both in-site and other generator's sites have been carried out in this site.

Processing part of the "NSRI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "NSRI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	139,350 drums (27,870 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WS1(M-1)	pit	1962	No	Yes	No	No
WS1(M-2)	pit	1962	No	No	No	No
WS1(L)	pit	1965	No	Yes	No	No
WS1(WSR/B)	building	1998	No	No	No	No
WS2(NL)	pit	1986	No	Yes	No	No
WS2(I)	building	1980	No	Yes	No	No
WS2(II)	building	1990	No	Yes	No	No

Comment #12124: Storage Units in NSRI

- WS1(M-1): Waste Storage Facility No.1 Waste storage facility M-1
- WS1(M-2): Waste Storage Facility No.1 Waste storage facility M-2
- WS1(L): Waste Storage Facility No.1 Waste storage facility L
- WS1(WSR/B): Waste Storage Facility No.1 Waste Size Reduction and Storage facilities
- WS2(NL): Waste Storage Facility No.2 Waste storage building (NL)
- WS2(I): Waste Storage Facility No.2 Waste building 1
- WS2(II): Waste Storage Facility No.2 Waste building 2

Reporting Group JAEA, Site Structure: Tokai

Country: Japan Reporting Year: 2005

Facility: Pu-fuel DC

Description	Plutonium Fuel Technology Development Center: department of the Nuclear fuel Cycle Engineering Laboratories (NFCEL)

Processing part of the "Pu-fuel DC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "Pu-fuel DC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	36,000 drums (7,200 m³)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
PWSF	building	1981	No	No	No	No
PWSF-2	building	1999	No	No	No	No

Comment #12118: Storage Units in JAEA::Tokai::FFP(MOX)

•PWSF: Plutonium Waste Storage Facility

Reporting Group JAEA, Site Structure: Tokai

Country: Japan Reporting Year: 2005

Facility: REP.DC

Description	Reprocessing Technology Development Center: department of the Nuclear fuel Cycle Engineering Laboratories (NFCEL)

Processing part of the "REP.DC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "REP.DC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	870 m³ for Liquid HLW, 420 canisters for Vitrified HLW, 10,320 drums (2,064 m³) for High Radioactive Solid waste, 92,140 drums (18,428 m³) for Low Radioactive Solid waste, 7,540 m³ for Low Radioactive Liquid waste				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
HLW(liq.)	tank (stainless steel)	1977	No	No	No	No
Sludge/B	tank (stainless steel)	1977	No	No	No	No
Sludge/B-2	tank (stainless steel)	1981	No	No	No	No
Solvent/B	tank (stainless steel)	1981	No	No	No	No
HRS/B	building	1977	No	No	No	No
HRS/B-2	building	1990	No	No	No	No
LRS/B-1	building	1985	No	No	No	No
LRS/B-2	building	1979	No	No	No	No
TVF(VHLW)	pit	1994	No	No	No	No
AsphaltSB	building	1982	No	No	No	No
AsphaltSB2	building	1989	No	No	No	No

Comment #12117: Storage Units in JAEA::Tokai::REP

•HRS/B: High Radioactive Solid Waste Storage Bldg.
•LRS/B: Low Radioactive Solid Waste Storage Bldg.
•TVF: Tokai Vitrification Facility
•AsphaltSB : Asphalt(Bituminized) Waste Storage Bldg.

The HRS/Bldgs have both pool cells and dry cells. Hulls and end pieces of the fuel are stored in the pool cells.

Reporting Group JAEA, Site Data: Tokai

Country: Japan Reporting Year: 2005

Full Name: JAEA::
Tokai Research and Development Center
- Nuclear Fuel Cycle Engineering Laboratories
- Nuclear Science Research Institute

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage	No	411	0	0	100	0	0	0	0	No
HLW	Storage	Yes	26	0	0	100	0	0	0	0	No

Comment #12186: HLW Inventory in JAEA::Toaki

• 218 vitrified waste canister (120L) stored in the TVF.
• 411 m³ of liquid HLW is reported as unprocessed volume.

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	54980	0	12.5	43.3	44.2	0	0	0	Yes

Comment #12187: Distribution% estimation of LLW of JAEA::Tokai

Waste volume used for distribution% of RP (reprocessing) estimation includes those from reprocessing plant and those are similar in radioactive nuclide composition (especially TRU). Waste volume used for distribution% of FF/FE (fuel fabrication / fuel enrichment) estimation includes uranium waste generated from R&D activities for FF/FE.

Comment #12188: LLW inventory in JAEA::Tokai

Total LLW: 274,900 drums;
•RP: 119,100 drums (43.3%), of which 81,000 (reprocessing), 27,100 (MOX FF), 11,000 (misc.)
•FF/FE: 34,400 drums (12.5%) - contaminated by uranium
•NA (nuclear application): 121,400 drums (44.2%)

Of 81,000 drums stored in the reprocessing plant, 29,967 drums (bituminization) and 1,776 (polymerization) are conditioned waste packages.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction	Yes			
Decontamination			same	
Evaporation			same	
Incineration			same	
Ion Exchange			same	
Segregation/Sorting			same	
Shredding			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			same	
Casting (of metal and slag)	Yes			
Cementation			same	
Grouting	Yes			
Polymerization			same	
Vitrification			same	

Reporting Group JAEA, Site Structure: Tsuruga

Country: Japan Reporting Year: 2005

Full Name: JAEA Tsuruga Head Office::
- Reactor Decommissioning Development Center (Fugen)
- Fast Breeder Reactor Research and Development Center (Monju)

Location: Tsuruga City, Fukui Pref.

License Holder(s) : Japan Atomic Energy Agency (JAEA)
Note: Each center has respective license for reactor installation/operation and site. These two centers are rolled-up to a “Tsuruga” site for reporting convenience.

Comment #12170: Fugen

The Fugen Nuclear Power Station will be reformed to “Reactor Decommissioning Development Center” after the decommissioning plan is approved by authority.

The following list the waste management facilities that are located at this site.

Facility: Fugen

Description	Fugen ATR (Advanced Thermal Reactor,165MWe) ceased commercial operation on 2003.03 ‡ The Fugen Nuclear Power Station will be reformed to “Reactor Decommissioning Development Center” after the decommissioning program is approved by authority.

Processing part of the "Fugen" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "Fugen" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	21,500 drums (4,300 m³) for SWSF				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1978	No	No	No	No
SWS/B-2	building	1985	No	No	No	No

Comment #12122: Storage Units in JAEA::Fugen

•SWS/B: Solid Waste Storage Bldg.
Reactor unit (RU) has enough storage capacity for operational waste such as tanks for resin used reactor water cleanup. Core components and reactor internals are kept in pools of each unit. Low-level radioactive solid wastes are stored in the Solid Waste Storage facility (SWS/Bldgs).

Reporting Group JAEA, Site Structure: Tsuruga

Country: Japan Reporting Year: 2005

Facility: Monju

Description	Fast Breeder Reactor Research and Development Center (Monju)

Processing part of the "Monju" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "Monju" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	23,000 drums (4,600 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	1993	No	No	No	No
SWS pool	pool	1997	No	No	No	No

Comment #12121: Storage Units in JAEA::Monju

•SWS/B: Solid Waste Storage Bldg.
Low-level radioactive solid wastes are stored in the Solid Waste Storage facility (SWS/Bldg).
Core components and reactor internals are kept in solid waste storage pool in the Maintenance and waste disposal building (build in 1997).

Reporting Group JAEA, Site Data: Tsuruga

Country: Japan Reporting Year: 2005

Full Name: JAEA Tsuruga Head Office::
- Reactor Decommissioning Development Center (Fugen)
- Fast Breeder Reactor Research and Development Center (Monju)

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage Fugen	No	3880	94.2	0	0	5.8	0	0	0	No
LLW	Storage Monju	No	620	100	0	0	0	0	0	0	No

Comment #12182: Waste Inventory in Fugen

• 19,418 drums (200L equivalent) in SWS/B, of which 2,016 are conditioned (bituminization).
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2
waste of % of nuclear applications generated from heavy water purification, which is radioisotope waste.

Comment #12183: Waste Inventory in Monju

• 3,060 drums (200L equivalent) in SWS/B, of which 20 are conditioned (polymerization).
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction	Yes			
Decontamination	Yes			
Evaporation			same	
Incineration			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			intermittent	
Cementation	Yes			
Grouting	Yes			
Polymerization			suspended	

Reporting Group JNFL, Site Structure: Rokkasho

Country: Japan Reporting Year: 2005

Full Name:	Japan Nuclear Fuel Limited :: - Uranium Enrichment Plant (- Low-Level Radioactive Waste Disposal Center) -> see "disposal" reporting group - Vitrified Waste Storage Center - Reprocessing Plant
Location:	Rokkasho Vil., Aomori Pref.
License Holder(s) :	Japan Nuclear Fuel Limited (JNFL)

Comment #9749: Uranium Enrichment Plant

• 1,050 tSWU/y

Comment #9751: Vitrified Waste Storage Center

Utilities in Japan have concluded reprocessing contracts with British and French companies for a total of 5,600 t U of spent fuel from light water reactors and 1,500 t U of spent fuel from a gas cooled reactor. In accordance with these contracts, vitrified waste canisters are returned to the utilities and are stored by JNFL.

Comment #9752: Reprocessing Plant

• 800 tU/y (Under Construction)
The Reprocessing Plant is now under final commissioning test. The spent fuel storage building, which has 3,000 tU storage capacity with three wet-pools, have already been in service operation. Spent fuels from NPP sites have been received and stored since 2000.

Comment #9753: MOX fuel Fabrication Plant (future facility)

(out of NEWMDB submission scope)
A license application for fuel fabrication (MOX fuel 130 tHM/y) business has submitted in 2005. The construction of the plant is scheduled to start in 2007 and completed in 2012.

The following list the waste management facilities that are located at this site.

Facility: REP

Description	Reprocessing Plant; radioactive waste management (RWM) associated with Spent Fuel Reprocessing

Processing part of the "REP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	Yes	LLW	No	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Unknown

Storage part of the "REP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	Yes	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Capacity	63,500 drums (12,700 m³) for solid waste 570 m³ for resin waste

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LRW/B-1	building	1999	No	No	No	No

Resin (1)	tank (stainless steel)	1999	No	No	No	No
LRW/B-2	building	2004	No	No	No	No

Comment #9755: Storage Units in JNFL::REP

•LRW/B-1: Low Radioactive Waste storage building-1 (for SF storage)
•Resin (1): resin waste tanks in the spent fuel receiving and storage building
•LRW/B-2: Low Radioactive Waste storage building-2 (for Reprocessing)

Facility: UEP

Description	Uranium Enrichment Plant; radioactive waste management (RWM) associated with Uranium enrichment

Storage part of the "UEP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	6,700 drums (1,340 m³)				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
UEW/B	building	1992	No	No	No	No
U&W S/B	building	2002	No	No	No	No

Comment #9748: Storage Units in JNFL::UEP

•UEW/B: Uranium Enrichment Waste Bldg.
•U&W S/B: Uranium and Waste Storage Bldg.

Facility: VWSC

Description	Vitrified Waste Storage Center; Storage facility of Vitrified Waste returned from Overseas

Storage part of the "VWSC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	1,440 dry storage pits for Vitrified HLW packages 1,200 drums (240 m³)				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS	building	1995	No	No	No	No
VHLW S/B	pit	1995	No	No	No	No

Comment #9754: Storage Units in JNFL::VWSC

Currently, the center has a storage capacity of 1,440 canisters of Vitrified HLW. The additional vitrified HLW storage building, which will have same capacity of 1,440 canisters, is under construction since June 2004 and will be completed in 2009. This means that total storage capacity will be increased to 2,880 canisters.

•SWS: solid waste storage room, located in Vitrified Waste Receiving Building
•VHLW S/B: Vitrified Waste Storage Building

Reporting Group JNFL, Site Data: Rokkasho

Country: Japan | Reporting Year: 2005

Full Name: Japan Nuclear Fuel Limited ::
- Uranium Enrichment Plant
(- Low-Level Radioactive Waste Disposal Center) -> see "disposal" reporting group
- Vitrified Waste Storage Center
- Reprocessing Plant

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location Facility Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage VWSC Solid	Yes	168	0	0	100	0	0	0	0	No

Comment #9876: HLW inventory in JNFL::Rokkasho

988 vitrified waste canisters (170L) have stored in the storage pits of VWSC. No vitrified waste has produced in the reprocessing plant.

Note: Since the start of storage operation, 1,180 vitrified waste canisters have returned from France, of which 192 is pending for inspection prior to storage at the reporting date and those volume will be reported at the next NEWMDB cycle.

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	2960	0	28.5	71.5	0	0	0	0	No

Comment #9877: LLW inventory in JNFL::Rokkasho

Total LLW: 14,845 drums in storage
•RP: 10,613 drums (71.5%), of which 9,993 in reprocessing plant, 620 in VWSC.
•FF/FE: 4,232 drums (28.5%) in uranium enrichment plant.

(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction	Yes			
Evaporation	Yes			
Filtration			same	
Incineration	Yes			
Shredding	Yes			

Processing - Conditioning method(s)

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

Reporting Group JRIA, Site Structure: RIWM

Country: Japan | Reporting Year: 2005

Full Name: JRIA's radioisotope waste management sites

Location: Takizawa Vil., Iwate Pref. / others

License Holder(s) : Japan Radioisotope Association (JRIA)

Comment #6940: Activities of JRIA

The Japan Radioisotope Association is engaged in activities concerning stable supply of various kinds of radioisotopes for research, industrial and medical uses, and collection and treatment of radioisotope wastes. The waste collection system consists of some separate sites, however, all sites of JRIA are abstracted to one site for the convenience of the NEWMDB reporting.

Comment #9890: Waste Management in JRIA::RIWM

Among various radioisotope waste, "medical RI waste" is treated and stored in the Takizawa Laboratory. Another "research RI waste" is stored in other associated sites such as relay stations constituting country-wide waste collection system of JRIA.

The following list the waste management facilities that are located at this site.

Facility: RWM(RI)

Description	JRIA's radioisotope waste management facilities throughout Japan

Processing part of the "RWM(RI)" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	, Phased

Storage part of the "RWM(RI)" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Total 181,100 drums (36,220 m^3)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Takizawa	building	1987	No	No	No	No
Kanto S/F	building	1966	No	No	No	No
Kanto WRS	building	1979	No	No	No	No
Kanto WRS2	building	1983	No	No	No	No
Ichihara	building	2000	No	No	No	No
Kansai WRS	building	2002	No	No	No	No

Comment #7103: JRIA radioisotope waste storage facilities

facilities and licenced year (fiscal)
• Kanto S/F (Kanto Storage Facility): Tokai Vil., Ibaraki Pref.(1966)
• Kanto WRS (Kanto Waste Relay Station): Kashiwa City, Chiba Pref.(1979)
• Kanto WRS2 (Kanto Waste Relay Station II): Kashiwa City, Chiba Pref.(1983)
• Takizawa (Kaya memorial Takizawa laboratory): Takizawa Vil., Iwate Pref.(1985)

• Ichihara Office: Ichihara City, Chiba Pref. (2000)
• Kansai WRS (Kansai Waste Relay Station): Daito City, Osaka Pref.(2002)

Comment #12154: Storage Capacity

Takizawa: 22,400 drums (4,480 m^3), Kanto S/F: 5,900 drums (1,180 m^3), Kanto WRS: 45,600drums (9,120m^3), Kanto WRS2: 22,000drums (4,400m^3), Ichihara: 83,600drums (16,720 m^3), Kansai WRS: 1,600 drums (320 m^3)

Reporting Group JRIA, Site Data: RIWM

Country: Japan Reporting Year: 2005

Full Name: JRIA's radioisotope waste management sites

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	21960	0	0	0	100	0	0	0	No

Comment #12179: Waste Inventory in JRIA::RIWM

• 109,800 drums (200L equivalent)
A part of radioisotope (RI) waste collected by JRIA, which were processed and stored in JAEA's Tokai site, are excluded from the waste volume.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Incineration			same	
Segregation/Sorting			same	

Comment #9858: Waste Processing in JRIA::RIWM

Among various radioisotope waste, "medical RI waste" is treated and stored in the Takizawa Laboratory. Another "research RI waste" is stored in other associated sites such as relay stations constituting country-wide waste collection system of JRIA.

Reporting Group U Fuel Fab, Site Structure: All FFP

Country: Japan Reporting Year: 2005

Full Name: All nuclear (uranium) fuel fabrication facilities

Location: 5 sites

License Holder(s) :
- Global Nuclear Fuel - Japan Co., Ltd.
- Mitsubishi Nuclear Fuel Co., Ltd.
- Nuclear Fuel Industries, Ltd. (2 licences for fabrication in 2 sites)
- JCO Co., Ltd. (license of fabrication cancelled on March 2000)

The following list the waste management facilities that are located at this site.

Facility: all FFP

Description	all nuclear fuel fabrication facilities (5 sites)

Processing part of the "all FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	, Phased

Storage part of the "all FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Total 58,160 drums (Solid Waste Storage Buildings in 5 fuel fabrication facilities)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	0	No	No	No	No

Reporting Group U Fuel Fab, Site Data: All FFP

Country: Japan Reporting Year: 2005

Full Name: All nuclear (uranium) fuel fabrication facilities

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	9020	0	100	0	0	0	0	0	No

Comment #12155: Waste Inventory in All FFPs

• 45,122 drums (200L equivalent)
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Incineration			same	
Segregation/Sorting			intermittent	
Shredding			same	

Reporting Group U Fuel Fab, Site Structure: GNF-J

Country: Japan Reporting Year: 2005

Full Name:	Global Nuclear Fuel - Japan Co., Ltd. (GNF-J) :: Kurihama factory
Location:	Yokosuka City, Kanagawa Pref.
License Holder(s) :	Global Nuclear Fuel - Japan Co., Ltd. (GNF-J)

The following list the waste management facilities that are located at this site.

Facility: FFP

Description	Nuclear Fuel Fabrication Plant; radioactive waste management (RWM) associated with Fuel Fabrication

Storage part of the "FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	18,460 drums (equivalent to 4,779 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
F/B-1	building	1975	No	No	No	No
WS/B-2	building	1981	No	No	No	No

Comment #12147: Storage Units in GNF-J

• WS/B: Waste Storage Bldg.
•F/B: Fabrication Bldg.

The uranium waste has been generated from fuel fabrication since 1970, however the former waste storage buildings are already pulled down.

Reporting Group U Fuel Fab, Site Structure: JCO

Country: Japan Reporting Year: 2005

Full Name: JCO :: Tokai plant

Location: Tokai Vil., Ibaraki Pref.

License Holder(s) : JCO Co., Ltd. (JCO)

Comment #12129: JCO Tokai plant

The conversion license was first granted to the SUMITOMO METAL MINING Co.,Ltd. In 1969, and the plant operation started in 1973. The Japan Nuclear Fuel Conversion Corporation was established in 1980, and took over the relevant facilities. The company name was altered to JCO in 1998. The license was cancelled on March 2000 after the critical accident occurred at September 30, 1999.

This site is identified by IAEA as a closed fuel fabrication plant.

The following list the waste management facilities that are located at this site.

Facility: FFP-closed

Description	Management of the waste from past fuel fabrication business (conversion) has been in practice.

Storage part of the "FFP-closed" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	12,100 drums (2,420 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WS/B-1	building	1980	No	No	No	No
WS/B-2	building	1983	No	No	No	No
WS/B-3	building	1989	No	No	No	No
WS/B-4	building	1993	No	No	No	No
WS/B-5	building	2000	No	No	No	No
F/B-2	building	2000	No	No	No	No

Comment #12146: Storage Units in JCO::Tokai

• WS/B: Waste Storage Bldg.
•F/B: Factory Bldg.

Reporting Group U Fuel Fab, Site Structure: MNF

Country: Japan Reporting Year: 2005

Full Name: Mitsubishi Nuclear Fuel Co., Ltd. (MNF):: Tokai plant

Location: Tokai Vil., Ibaraki Pref.

License Holder(s) : Mitsubishi Nuclear Fuel Co., Ltd. (MNF)

The following list the waste management facilities that are located at this site.

Facility: FFP

Description	Nuclear Fuel Fabrication Plant; radioactive waste management (RWM) associated with Fuel Fabrication

Storage part of the "FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	11,600 drums (2,320 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
F/B	building	1972	No	No	No	No
Equip S/B	building	1975	No	No	No	No
WS/B-1	building	1976	No	No	No	No
WS/B-2	building	1984	No	No	No	No
WS/B-3	building	1986	No	No	No	No

Comment #12148: Storage Units in MNF

•F/B: Factory Bldg.
•Equip S/B: Contaminated Equipment Storage Bldg.
• WS/B: Waste Storage Bldg.

Reporting Group U Fuel Fab, Site Structure: NFI Kumato

Country: Japan Reporting Year: 2005

Full Name: Nuclear Fuel Industries, Ltd. :: Kumatori Works

Location: Kumatori Town, Osaka Pref.

License Holder(s) : Nuclear Fuel Industries, Ltd. (NFI)

The following list the waste management facilities that are located at this site.

Facility: FFP

Description	Nuclear Fuel Fabrication Plant; radioactive waste management (RWM) associated with Fuel Fabrication

Storage part of the "FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	7,500 drums (1,500 m³) for solid				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WS/B-1	building	1976	No	No	No	No
WS/B-2	building	1976	No	No	No	No
WS/B-3	building	1983	No	No	No	No
FMWS/B	building	2002	No	No	No	No
F/B-1	building	2005	No	No	No	No

Comment #12149: Storage Units in NFI::Kumatori

• WS/B: Waste Storage Bldg.
•FMWS/B: Fuel Material and Waste Storage Bldg. for R&D
•F/B: Fabrication Bldg.

Reporting Group U Fuel Fab, Site Structure: NFI Tokai

Country: Japan Reporting Year: 2005

Full Name:	Nuclear Fuel Industries, Ltd. :: Tokai Works
Location:	Tokai Vil., Ibaraki Pref.
License Holder(s) :	Nuclear Fuel Industries, Ltd. (NFI)

The following list the waste management facilities that are located at this site.

Facility: FFP

Description	Nuclear Fuel Fabrication Plant; radioactive waste management (RWM) associated with Fuel Fabrication

Storage part of the "FFP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				

Capacity	8,500 drums (1,700 m³) for solid

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WS/B-I	building	1979	No	No	No	No
WS/B-II	building	1999	No	No	No	No

Comment #12150: Storage Units in NFI::Tokai

• WS/B: Waste Storage Bldg.

Reporting Group Utilities, Site Structure: All NPS

Country: Japan Reporting Year: 2005

Full Name: All Nuclear Power Stations

Location: 18 sites

License Holder(s) : 9 EPC + JAPC

The following list the waste management facilities that are located at this site.

Facility: all NPP

Description	all nuclear power reactor facilities

Processing part of the "all NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	, Phased

Storage part of the "all NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Total 879,600 drums (Solid Waste Storage Buildings in 18 nuclear power stations)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	0	No	No	No	No

Reporting Group Utilities, Site Data: All NPS

Country: Japan Reporting Year: 2005

Full Name: All Nuclear Power Stations

Inventory Reporting Date: March 2006 Waste Matrix: JP

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	101820	100	0	0	0	0	0	0	No
LLW	Storage	Yes	11700	100	0	0	0	0	0	0	No

Comment #12134: Waste Inventory of ALL NPPs

Total 567,547 drums (in 200L equivalent) in SWS/B, of which 58,480 are disposal packages (reported as processed).
(reported volume in m³) = (number of drums rounded to nearest 100) x 0.2

Waste volume dose not include replaced control rods and channel boxes, etc. (kept as generated or shredded), spent ion exchange resins that are reserved in tanks, 29 replaced steam generators, and other waste items of a large-volume.

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Reporting Group Utilities, Site Structure: Fukushima1

Country: Japan Reporting Year: 2005

Full Name: Tokyo EPC :: Fukushima Daiichi Nuclear Power Station

Location:

License Holder(s) : Tokyo Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	284,500 drums (56,900 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1971	No	No	No	No
SWS/B-2	building	1974	No	No	No	No
SWS/B-3	building	1976	No	No	No	No
SWS/B-4	building	1976	No	No	No	No
SWS/B-5	building	1977	No	No	No	No
SWS/B-6	building	1978	No	No	No	No
SWS/B-7	building	1981	No	No	No	No
SWS/B-8	building	1983	No	No	No	No
Bunker/B	bunker	1980	No	No	No	No
CentralWM	building	1984	No	No	No	No
AuxPool	pool	1997	No	No	No	No

Reporting Group Utilities, Site Structure: Fukushima2

Country: Japan Reporting Year: 2005

Full Name: Tokyo EPC ::
Fukushima Daini Nuclear Power Station

Location: Tomioka Town & Naraha Town, Fukushima Pref.

License Holder(s) : Tokyo Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	32,000 drums (6,400 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	1981	No	No	No	No
Bunker/B	bunker	1988	No	No	No	No

Reporting Group Utilities, Site Structure: Genkai

Country: Japan Reporting Year: 2005

Full Name: Kyushu EPC ::
Genkai Nuclear Power Station

Location: Genkai Town, Saga Pref.

License Holder(s) : Kyushu Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				

Capacity	49,000 drums (9,800 m³) for SWS/B

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1975	No	No	No	No
SWS/B-2	building	1981	No	No	No	No
SWS/B-3	building	1994	No	No	No	No
SGS/B	building	1994	No	No	No	No
SWS/B-4	building	2005	No	No	No	No

Reporting Group Utilities, Site Structure: Hamaoka

Country: Japan Reporting Year: 2005

Full Name: Chubu EPC ::
Hamaoka Nuclear Power Station

Location: Omaezaki City, Shizuoka Pref.

License Holder(s) : Chubu Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	42,000 drums (8,400 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1975	No	No	No	No
SWS/B-2	building	1978	No	No	No	No
RW/B-1	bunker	1981	No	No	No	No

Reporting Group Utilities, Site Structure: Higashidor

Country: Japan Reporting Year: 2005

Full Name:	Tohoku EPC :: Higashidori Nuclear Power Station
Location:	Higashidori Vil., Aomori Pref.
License Holder(s) :	Tohoku Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	9,000 drums (1,800 m³) for SWS/B				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	2004	No	No	No	No

Reporting Group Utilities, Site Structure: Ikata

Country: Japan Reporting Year: 2005

Full Name: Shikoku EPC ::
Ikata Nuclear Power Station

Location: Ikata Town, Ehime Pref.

License Holder(s) : Shikoku Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	38,500 drums (7,700 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1977	No	No	No	No
SWS/B-2	building	1994	No	No	No	No
SGS/B	building	1998	No	No	No	No

Reporting Group Utilities, Site Structure: Kashiwazak

Country: Japan Reporting Year: 2005

Full Name:	Tokyo EPC :: Kashiwazaki Kariwa Nuclear Power Station
Location:	Kashiwazaki City & Kariwa Vil., Niigata Pref.
License Holder(s) :	Tokyo Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	30,000 drums (6,000 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	1984	No	No	No	No

Reporting Group Utilities, Site Structure: Mihama

Country: Japan Reporting Year: 2005

Full Name: Kansai EPC ::
Mihama Nuclear Power Station

Location: Mihama Town, Fukui Pref.

License Holder(s) : The Kansai Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	35,000 drums (7,000 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1970	No	No	No	No
SWS/B-2	building	1973	No	No	No	No
SWS/B-3	building	1975	No	No	No	No
SWS/B-4	building	1980	No	No	No	No
SGS/B-1	building	1993	No	No	No	No
SGS/B-2	building	1995	No	No	No	No

Reporting Group Utilities, Site Structure: Ohi

Country: Japan Reporting Year: 2005

Full Name:	Kansai EPC :: Ohi Nuclear Power Station
Location:	Ohi Town, Fukui Pref.
License Holder(s) :	The Kansai Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	38,900 drums (7,780 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-A	building	1977	No	No	No	No
SWS/B-B	building	1977	No	No	No	No
SWS/B-C	building	1986	No	No	No	No
SGS/B-A	building	1994	No	No	No	No
SGS/B-B	building	1996	No	No	No	No
SGS/B-B	building	1996	No	No	No	No

Reporting Group Utilities, Site Structure: Onagawa

Country: Japan Reporting Year: 2005

Full Name: Tohoku EPC ::
Onagawa Nuclear Power Station

Location: Onagawa Town & Ishinomaki City, Miyagi Pref.

License Holder(s) : Tohoku Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				

Capacity	30,000 drums (6,000 m³) for SWS/B

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B(A)	building	1983	No	No	No	No
SWS/B(B)	building	1994	No	No	No	No
SWS/B(C)	building	1999	No	No	No	No
Bunker/B	building	1993	No	No	No	No

Reporting Group Utilities, Site Structure: Sendai

Country: Japan | Reporting Year: 2005

Full Name: Kyushu EPC ::
Sendai Nuclear Power Station

Location: Satsumasendai City, Kagoshima Pref.

License Holder(s) : Kyushu Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	17,000 drums (3,400 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	1984	No	No	No	No

Reporting Group Utilities, Site Structure: Shika

Country: Japan Reporting Year: 2005

Full Name: Hokuriku EPC ::
Shika Nuclear Power Station

Location: Shika Town, Ishikawa Pref.

License Holder(s) : Hokuriku Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	10,000 drums (2,000 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-1	building	1993	No	No	No	No
SWS/B-2	building	2005	No	No	No	No

Reporting Group Utilities, Site Structure: Shimane

Country: Japan Reporting Year: 2005

Full Name: Chugoku EPC ::
Shimane Nuciear Power Station

Location: Matsue City, Shimane Pref.

License Holder(s) : The Chugoku Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				

Capacity	35,500 drums (7,100 m^3) for SWS/B

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-A	building	1973	No	No	No	No
SWS/B-B	building	1976	No	No	No	No
SWS/B-C	building	1981	No	No	No	No
Bunker/B	bunker	1984	No	No	No	No

Reporting Group Utilities, Site Structure: Takahama

Country: Japan Reporting Year: 2005

Full Name: Kansai EPC ::
Takahama Nuclear Power Station

Location: Takahama Town, Fukui Pref.

License Holder(s) : The Kansai Electric Power Co., Inc.

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			

List SRS?	No
Capacity	50,600 drums (10,120 m³) for SWS/B

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-A	building	1974	No	No	No	No
SWS/B-B	building	1974	No	No	No	No
SWS/B-C	building	1979	No	No	No	No
SWS/B-D	building	1983	No	No	No	No
SGS/B-A	building	1994	No	No	No	No
SGS/B-B	building	1995	No	No	No	No
ResinS/B	building	1975	No	No	No	No

Reporting Group Utilities, Site Structure: Tokai

Country: Japan | Reporting Year: 2005

Full Name:	JAPC :: Tokai Power Station & Tokai Daini Power Station
Location:	Tokai Vil., Ibaraki Pref
License Holder(s) :	The Japan Atomic Power Co., Inc. (JAPC)

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	1,600 drums (320 m³) for SWSF (of Tokai NPS) 73,000 drums (14,600 m³) for SWSF (of Tokai-2 NPS)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Drum S/B	building	1966	No	No	No	No
SWS/B-A	building	1978	No	No	No	No
SWS/B-B	building	1982	No	No	No	No
RW/B	building	1982	No	No	No	No
Bunker-GCR	bunker	1986	No	No	No	No

Reporting Group Utilities, Site Structure: Tomari

Country: Japan Reporting Year: 2005

Full Name: Hokkaido EPC ::
Tomari Nuclear Power Station

Location: Tomari Vil., Hokkaido

License Holder(s) : Hokkaido Electric Power Co., Inc

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	18,000 drums (3,600 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B	building	1989	No	No	No	No

Reporting Group Utilities, Site Structure: Tsuruga

Country: Japan Reporting Year: 2005

Full Name: JAPC :: Tsuruga Power Station

Location: Tsuriga City, Fukui Pref.

License Holder(s) : The Japan Atomic Power Co., Inc. (JAPC)

The following list the waste management facilities that are located at this site.

Facility: NPP

Description	radioactive waste management (RWM) associated with Nuclear Reactor Installation/Operation

Storage part of the "NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	LLW	No	No
SRS	No	No			
List SRS?	No				
Capacity	85,000 drums (17,000 m³) for SWS/B				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SWS/B-A	building	1976	No	No	No	No
SWS/B-B	building	1979	No	No	No	No
SWS/B-C	building	1985	No	No	No	No
Bunker/B	bunker	1987	No	No	No	No

REGULATORS

Country: Japan Reporting Year: 2005

Name	NISA/METI
Full Name	Nuclear and Industrial Safety Agency Ministry of Economy, Trade and Industry
Division	
City or Town	Tokyo

Comment #6967: Regulatory Functions

The Minister of METI, as the competent minister stipulated in the Reactor Regulation Law and the Electric Utilities Industry Law, governs the safety regulation over all activities on the utilization of nuclear energy including nuclear power generation, and NISA was established as a special organization of METI to administer the safety regulation.

NISA, under the Minister of METI, has the authority to issue a license for the establishment of a nuclear facility, after conducting safety examination that the siting, structure and equipment has no hindrance to the prevention of disasters. It also has the authority to cancel the license under certain circumstances such as violation of applicable laws and regulations by the license holder.

Name	STPB/MEXT
Full Name	Ministry of Education, Culture, Sports, Science and Technology
Division	Science and Technology Policy Bureau
City or Town	Tokyo

Comment #6968: Regulatory Functions

The safety regulation concerning the activities around the nuclear utilization from a scientific and technological aspect and the utilization of radioisotopes (excluding medicines, etc.) is governed by the Minister of MEXT as the competent minister, and is administered by the Science and Technology Policy Bureau (STPB).

With regard to the licensing of a new business under the Reactor Regulation Law and the radioisotope waste management business under the Radiation Hazards Prevention Law, the Minister of MEXT has the authority to issue the respective licenses, after conducting an examination of the site, structure and equipment from the standpoint of disaster prevention. He or she also has the authority to revoke the licenses under certain circumstances, such as the violation of applicable laws and regulations by the license holder.

Name	MHLW
Full Name	Ministry of Health, Labour and Welfare
Division	- Pharmaceutical and Food Safety Bureau - Health Policy Bureau
City or Town	Tokyo

Comment #6969: Regulatory Functions

The Ministry of Health, Labour and Welfare (MHLW) administers the safety regulations for radioactive medicines and the regulations for the protection against clinical radiation.

REGULATORS

Country: Japan Reporting Year: 2005

Name	NSC
Full Name	Nuclear Safety Commission Cabinet Office
Division	
City or Town	Tokyo

Comment #6970: Regulatory Functions

The Nuclear Safety Commission (NSC), which was established within the Cabinet Office under the Atomic Energy Basic Law, consists of five members who are appointed by the Prime Minister with the consent of the Diet. The chairperson is elected by the committee from among its members.

The NSC has duties of planning, deliberation and decisions on matters that are related to ensuring safety of the utilization of nuclear energy, and establishes guidelines to be used at the safety examination.

Name	JNES
Full Name	Japan Nuclear Energy Safety Organization (independent administrative institutions)
Division	
City or Town	Tokyo

Comment #6972: Regulatory Functions

A law for the establishment of an incorporated administrative agency, "Japan Nuclear Energy Safety Organization" as a technical support organization of NISA was approved in December 2002 by the Diet. The objectives of this organization, which is scheduled to be established in October 2003, is to provide a foundation for the nuclear safety preservation with regard to utilization of nuclear energy.

Name	NUSTEC
Full Name	Nuclear Safety Technology Center (non-governmental, delegated agency)
Division	
City or Town	Tokyo

Comment #6971: Regulatory Functions

As to the activities of the STPB related to the safety regulation for the nuclear facility, Nuclear Safety Technology Center (NUSTEC) is designated as an organization for welding inspections of the nuclear facility under the Reactor Regulation Law, periodic inspections of the facilities for radioisotope waste management business under the Radiation Hazards Prevention Law, etc.

REGULATIONS / LAWS

Country: Japan Reporting Year: 2005

Name	Act186/S30	
Title or Name	Atomic Energy Basic Act	
Reference Number	Act No.186 /S30(1955)	
Date Promulgated or Proclaimed	1955-12-19	Law

Name	Act179/H14	
Title or Name	Act on Japan Nuclear Energy Safety Organization	
Reference Number	Act No.179 /H14(2002)	
Date Promulgated or Proclaimed	2002-12-18	Law

Name	Act166/S32	
Title or Name	Act on the Regulations of Nuclear Source Material, Nuclear Fuel Material and Reactors	
Reference Number	Act No.166 /S30(1957)	
Date Promulgated or Proclaimed	1957-06-10	Law

Name	Act167/S32	
Title or Name	Act on Prevention from Radiation Hazards due to Radioisotopes, etc.	
Reference Number	Act No.167 /S32(1957)	
Date Promulgated or Proclaimed	1957-06-10	Law

Name	Act117/H12	
Title or Name	Specified Radioactive Waste Final Disposal Act	
Reference Number	Act No.117 /H12(2000)	
Date Promulgated or Proclaimed	2000-06-07	Law

Comment #12190: Act117/H12

The term "Specified Radioactive Waste" as used in this Act (shall) means a vitrified substance remaining after the reprocessing of spent fuel.
«Article 2 of the Specified Radioactive Waste Final Disposal Act»

REGULATIONS / LAWS

Country: Japan Reporting Year: 2005

Name	Act048/H17	
Title or Name	Act on Deposit and Management of the Reserve Fund for Spent Fuel Reprocessing and so forth in the Nuclear Power Generation	
Reference Number	Act No.48 /H17(2005)	
Date Promulgated or Proclaimed	2005-05-20	Law

Country Waste Profile Report for

Kuwait

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-05-23 15:50:32

Waste Class Matrix(ces) Used/Defined

Country: Kuwait, State of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #127: waste classification in Kuwait

The IAEA Waste Classification System (Safety Guide 111-G-1.1) is adopted in Kuwait for future use. A new regulation (Ministerial Decree No. 553 for the year 2003) for disposal and storage of radioactive materials was passed on 11.11.2003 in which it is mentioned that the IAEA Waste Classification System was adopted for use in Kuwait.

Most radioactive waste generated in the country is Exempt Waste (EW) or treated (diluted) to below EW levels. Small amounts of LILW are generated, which includes spent/disused sealed sources. There are no HLW in Kuwait.

Depleted uranium waste (derived from the Gulf War in 1991) will be addressed in the future with the help of the IAEA. Spent radium needles/tubes from the Kuwait Cancer Control Centre (KCCC) were conditioned between 16-20 December 2002 by an expert team from the Republic of South Korea, authorized by the IAEA. This waste is now stored at the KCCC.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	**X**			
processed		**X**	**X**	**X**

Groups Overview

Country: Kuwait, State of Reporting Year: 2005

Reporting Group: **RG-KUW**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Central Reporting Group in Kuwait. One Reporting Group in the Country situated in the Ministry of Health.

Site Name	Facility Name	Facilities Defined		
KCCC	KCCC		storage	
KUM	KUM		storage	
KUS	KUS		storage	

REGULATORS

Country: Kuwait, State of Reporting Year: 2005

Name	MOH
Full Name	Minister of Health
Division	Radiation Protection Committee
City or Town	Kuwait

Name	AMIRI
Full Name	His Highness the Amir
Division	
City or Town	Kuwait

REGULATIONS / LAWS

Country: Kuwait, State of Reporting Year: 2005

Name	MD324/2001	
Title or Name	Ministerial Decree (324) of 2001	
Reference Number	MD-324 /2001	
Date Promulgated or Proclaimed	2001-02-28	Regulation

Name	DecLaw62	
Title or Name	Amiri Decree: Decree Law No.62 for the year 1980 Regarding Protection of the Environment & the General Policy for the Environment Protection	
Reference Number	Decree Law No. 62/1980	
Date Promulgated or Proclaimed	1980-12-31	Law

Name	MD553/2003	
Title or Name	Ministerial Decree (553) of 2003	
Reference Number	MD-553/2003	
Date Promulgated or Proclaimed	2003-11-11	Regulation

MILESTONES

Country: Kuwait, State of

Reporting Year: 2005

Start Year or Reference Year:	2002	End Year	

Description of Milestone

Between 16-20 December, 2002, an expert team (3 members) from the Republic of South Korea, authorized by the IAEA, carried out the conditioning operation of 465 Ra-226 spent sealed sources (294 needles, 166 tubes & 5 special shaped sources) held at Kuwait Cancer Control Centre (KCCC). As a result of the conditioning operation, 1,479.47 mg (54.75 GBq) of radium sources were conditioned in three packages. The conditioning was carried out with the co-operation of staff members from Radiation Protection Department, Ministry of Health, Kuwait, under the supervision of IAEA Technical Officer.

Country Waste Profile Report for Lithuania

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:22:33

Waste Class Matrix(ces) Used/Defined

Country: Lithuania, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: National

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Group-III Solid	0	100	0
Group-II Solid	100	0	0
Group-I Solid	100	0	0
LIQUID	100	0	0

Comment #447: Waste Classification

Classification of the waste is performed according to Former Soviet Union regulation "Sanitary Rules for Design and Operation of Nuclear Power Plants, SP-AS-88/93. Moscow, Gosatomenergoproject, 1993 (in Russian)".

This old classification system of radioactive waste was formally abandoned when the "Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant" was adopted in 2001 (VD-RA-01-2001, see Attachment No 184, our Reference No 3). However, the old classification system is still applied at Ignalina NPP not only for the historical, already stored waste but also for the new produced waste. The new classification system is applied in the planning of the radwaste processing in the new waste management facilities.

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Lithuania, Republic of

Reporting Year: 2005

Reporting Group: **NATIONAL**

Inventory Reporting Date: December 2005

Waste Matrix Used: National

Description:

Site Name	Facility Name	Facilities Defined		
Ignal-NPP	WPF	processing		
	WSF		storage	
Maisiagala	MWDF			disposal

Reporting Group NATIONAL, Site Structure: Ignal-NPP

Country: Lithuania, Republic of | Reporting Year: 2005

Full Name: Ignalina Nuclear Power Plant

License Holder(s) : Ignalina NPP

Comment #404: Concrete Tanks

Concrete tanks for spent resins and evaporator concentrates (sludge)

Comment #405: SRS

Since the late 1980s SRS were shipped to INPP. Over the years, until late in 2000, the disused SRS were dumped, together with other wastes, into various storage areas of SB155/1, SB157 and SB157/1.

Beginning late in 2000, the disused SRS have been stored separately from other waste in the compartment in SB157/1 reserved for this waste. The SRS, still in their own-shielded packages, are loaded into cylindrical stainless steel containers for storage, which are then placed in the storage compartment.

The following list the waste management facilities that are located at this site.

Facility: WPF

Description	Ignalina Waste Processing Facility

Processing part of the "WPF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Group-III Solid	Yes	Yes	Group-II Solid	Yes	Yes
Group-I Solid	Yes	Yes	LIQUID	Yes	Yes
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1983

Comment #7442: Cementation Facility

Erection of a cementation facility of spent ion exchange resins, perlite mixtures and sediments as well as a new interim storage facility is now in progress. This cementation facility is expected to be operational in 2005.

Comment #7443: SWMSF

In the frame of the pre-decommissioning support projects, a new Solid Waste Management and Storage Facility (SWMSF) will be built under the Grant Agreement between the EBRD as administrator of a grant fund provided by the Ignalina International Decommissioning Support Funds and Lithuanian Government. Tendering process has been started in 2003. It is expected that the contract for design, construction and licensing of the SWMSF will be signed in 2005. The SWMSF will be built in order to characterize, treat, condition and interim store the retrieved operational waste accumulated on the site as well as the future operational and decommissioning wastes of the same types. The SWMSF will comprise, among others, the capabilities for size reduction, super compaction, incineration, packaging, immobilization and interim storage.

Reporting Group NATIONAL, Site Structure: Ignal-NPP

Country: Lithuania, Republic of Reporting Year: 2005

Facility: WSF

Description	Ignalina Waste Storage Facility.

Storage part of the "WSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Group-III Solid	Yes	Yes	Group-II Solid	Yes	Yes
Group-I Solid	Yes	Yes	LIQUID	Yes	Yes
SRS	Yes	Yes			

List SRS?	No
Capacity	

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CT	tank (concrete)	1983	No	No	No	No
SB155	building	1983	No	Yes	No	No
SB155/1	building	1990	No	Yes	No	Yes
SB157	building	1984	No	No	No	Yes
SB157/1	building	1989	No	No	No	Yes
SB158	building	1987	No	No	Yes	No

Comment #7441: Waste Storage Facility

The INPP solid radwaste storage facility consists of four buildings, namely building No. 155, No. 155/1, No. 157 and No. 157/1. This facility is Soviet type facility designed for the interim storage of low and intermediate level radioactive waste arising as a consequence of operation of NPP. Since September 1990 institutional waste from Lithuanian small producers is stored in this facility too.

The solidified waste storage facility, building No. 158, is designed for the storage of bituminized radwaste arising as a product of radioactive liquid waste treatment at INPP. It contains 11 canyons with an effective volume of 2000 m3 each. One canyon has an effective volume of 800 m3. It is intension to convert building 158 to a disposal facility.

Comment #7444: Licensed Landfill

A Licensed Landfill for very low-level waste will be build at INPP site. A project is being launched in order to develop a Licensed Landfill concept, associated WAC, licensing requirements and tendering documents with intention to have this disposal facility in operation in 2007.

Reporting Group NATIONAL, Site Structure: Maisiagala

Country: Lithuania, Republic of Reporting Year: 2005

Full Name: Maisiagala

License Holder(s) : Not licensed - responsible organization is Radioactive Waste Management Agency (RATA)

Comment #406: Group I and II

The split of volumes for Group I and II disposal is an estimate because the Nuclear Applications waste has not been classified according to the NPP classification (Group I, II, etc). The “Radon” type disposal facility is located at this site.

The following list the waste management facilities that are located at this site.

Facility: MWDF

Description	Maisiagala Waste Disposal Facility

Disposal part of the "MWDF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Group-III Solid	No	No	Group-II Solid	Yes	No
Group-I Solid	Yes	No	LIQUID	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	1 - 5		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
operation		1963	1988
closure		1988	
institutional control		1988	

Comment #7445: MWDF

The existing disposal facility for radioactive waste from research, medicine and industry at Maisiagala was built in the early 1960’s according to a concept typical of those applied in the former Soviet Union at that time. Maisiagala facility received institutional waste from 1963 until 1988, when the facility was closed.

Comment #7446: Upgrading of MWDF

The supervision of the existing “Radon” type institutional radwaste disposal facility near Maisiagala was entrusted to the Lithuania's Radioactive Waste Management Agency (RATA) in 2002. RATA has applied for a PHARE project aiming for safety assessment and upgrading of Maisiagala repository. The project started in 2004. The project includes the preparation of Safety Analysis Report, conceptual and detail design of the facility upgrading, and documentation for works, supply tenders and repository licensing.

REGULATORS

Country: Lithuania, Republic of

Reporting Year: 2005

Name	VATESI
Full Name	State Nuclear Power Safety Inspectorate
Division	
City or Town	Vilnius

Name	RPC
Full Name	Radiation Protection Center
Division	
City or Town	Vilnius

Name	MoE
Full Name	Ministry of Environment
Division	
City or Town	Vilnius

REGULATIONS / LAWS

Country: Lithuania, Republic of Reporting Year: 2005

Name	Strategy	
Title or Name	Strategy on Radioactive Waste Management	
Reference Number	Attachment, our Reference No. 1	
Date Promulgated or Proclaimed	2002-02-06	Law

Attachment #1163: Strategy on Radioactive Waste Manaegment

File name: Strategy_on_Radioactive_Waste_Management.doc

File type: MS Office Document

Member State's Reference # 1

Name	VIII-1190	
Title or Name	Law on Management of Radioactive Waste	
Reference Number	Attachment, our Reference No. 2	
Date Promulgated or Proclaimed	1999-05-20	Law

Attachment #1164: Law on Management of Radioactive Waste

File name: Law_on_Management_of_Radioactive_Waste.doc

File type: MS Office Document

Member State's Reference # 2

Name	VD-RA-01	
Title or Name	Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant	
Reference Number	Attachment, our Reference No. 3	
Date Promulgated or Proclaimed	2001-07-27	Regulation

Attachment #1165: Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant

File name: Regulation on Pre-Disposal Management.doc

File type: MS Office Document

Member State's Reference # 3

Name	P-2002-02	
Title or Name	Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste	
Reference Number	Attachment, our Reference No. 4	
Date Promulgated or Proclaimed	2002-10-28	Regulation

Attachment #1166: Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste

File name: Regulation on Disposal of LILW.doc

File type: MS Office Document

Member State's Reference # 4

REGULATIONS / LAWS

Country: Lithuania, Republic of Reporting Year: 2005

Name	I-1613	
Title or Name	Law on Nuclear Energy	
Reference Number	Attachment, our Reference No. 5	
Date Promulgated or Proclaimed	1996-11-14	Law

Attachment #1168: Law on Nuclear Energy

File name: Law_on_Nuclear_Energy.doc

File type: MS Office Document

Member State's Reference # 5

Name	LAND-34	
Title or Name	Clearance Levels of Radionuclides, Conditions for Reuse of Materials and Disposal of Waste	
Reference Number	Attachment, our Reference No. 6	
Date Promulgated or Proclaimed	2000-03-31	Regulation

Attachment #1167: Clearance Levels of Radionuclides, Conditions for Reuse of Materials and Disposal of Waste

File name: LAND 34-2000_angl.doc

File type: MS Office Document

Member State's Reference # 6

Name	VD-EN-01	
Title or Name	General Requirements for Decommissioning of Ignalina NPP	
Reference Number	Attachment, our reference No. 7	
Date Promulgated or Proclaimed	1999-10-06	Regulation

Attachment #1169: General Requirements for Decommissioning of Ignalina NPP

File name: VATESI_VD-EN-01-99_Decommiss.doc

File type: MS Office Document

Member State's Reference # 7

Name	VIII-1019	
Title or Name	Law on Radiation Protection	
Reference Number	Attachment, our reference No. 8	
Date Promulgated or Proclaimed	1999-01-12	Law

Attachment #1162: Law on Radiation Protection

File name: Law on Radiation Protection.doc

File type: MS Office Document

Member State's Reference # 8

REGULATIONS / LAWS

Country: Lithuania, Republic of Reporting Year: 2005

Name	P-2003-01	
Title or Name	General Waste Acceptance Criteria for Disposal in a Near Surface Repository	
Reference Number	Our Reference No. 9	
Date Promulgated or Proclaimed	2003-02-20	Regulation

Name	P-2003-02	
Title or Name	Requirements on Disposal of Very Low Level Waste	
Reference Number	Our Reference No 10	
Date Promulgated or Proclaimed	2003-08-18	Regulation

MILESTONES

Country: Lithuania, Republic of

Reporting Year: 2005

Start Year or Reference Year:	2002	End Year	2007
Description of Milestone			
Strategy on Radioactive Waste Management approved by the Government (First Strategy. According to the Law on Radioactive Waste Management the Strategy shall be updated every five years).			

Start Year or Reference Year:	2005	End Year	2007
Description of Milestone			
Programme for Decommissioning of Unit 1 at Ignalina NPP approved by the Government. This Programme defines also implementation of the radwaste treatment and conditioning facilities for operational waste.			

Policies

Country: Lithuania, Republic of | Reporting Year: 2005

National Systems

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

Comment #422: The main objective of the national policy

The main objective of the national policy is provide for the set of practical actions that shall bring management of radioactive waste in the Republic of Lithuania in compliance with the radioactive waste management principles of IAEA and with the good practices in force in EU Member States.

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

Comment #413: National Strategy on Radioactive Waste Management

Approved by resolution of the Government of the Republic of Lithuania No.174 dated February 6, 2002

Attachment #1155: Strategy on Radioactive Waste Management

File name: Strategy_on_Radioactive_Waste_Management.doc

File type: MS Office Document

Member State's Reference # 1

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Comment #414: Law on the Management of Radioactive Waste

May 20, 1999, No. VIII-1190, Vilnius

Attachment #1156: Law on Management of Radioactive Waste

File name: Law_on_Management_of_Radioactive_Waste.doc

File type: MS Office Document

Member State's Reference # 2

	Responsibilities	(Complete;Incomplete)

Policies

Country: Lithuania, Republic of | **National Systems** | Reporting Year: 2005

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility		
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

Comment #415: Radwaste classification systems

The old classification system of radioactive waste was formally abandoned when the “Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant” was adopted in 2001-07-27. However, the old classification system is still applied at Ignalina NPP not only for the old, already stored waste but also for the new produced waste. Solid waste continues to be separated into three groups. There can be the situation when two classification systems exist in the same time: the old classification system is applied for the stored accumulated waste and the new classification system is applied for the waste processed in the new waste management facilities.

Attachment #1157: Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant

File name: Regulation on Pre-Disposal Management.doc

File type: MS Office Document

Member State's Reference # 3

	Activities	(Yes;Partially;No)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes

36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

Comment #416: An inventory of radioactive waste

As soon as possible correlations linking hard-to-measure radiologically relevant radionuclides to easily measurable gamma-emitters should be developed where possible for each waste stream and the validity of these correlations should be checked at predetermined intervals.

Comment #417: Retrieval of old accumulated solid radwaste

The low and intermediate level solid waste previously classified as Group 1 and 2 being stored on the Ignalina NPP site, containing mainly short lived radionuclides, shall be retrieved for characterization followed by conditioning and subsequent storage/disposal.

Comment #7447: Storage and disposal plans

The Ignalina NPP decommissioning process will generate large volumes of very low, low, intermediate and high-level radioactive waste. It is generally considered necessary to have a Licensed Landfill for very low level waste (VLLW) in operation in 2007 and a Near Surface Repository (NSR) for short-lived low- and intermediate-level waste (LILW) in operation in 2010-2012. It was decided that interim storage facility should be built in stages (modular design) for storing operational short-lived waste. It will be the possibility for future extensions in order to provide storage of waste packages generated during decommissioning after 2010, if necessary. The new interim storage facility should be also capable of storing the unprocessed long-lived waste. Therefore new interim storage facility will be designed for 50 years operation.

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	No
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All

46	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 #418: Radioactive waste disposal facility at Maisiagala

PHARE project has been started in 2004 to perform the safety analysis of existing “Radon” type radioactive waste disposal facility near Maisiagala as for a temporary storage facility and, if the safety requirements are met, to perform the licensing. Later on, the investigations shall be performed and it shall be decided whether this facility could be converted into a repository or the site shall be after remediation released for the free use

Comment #419: Reference design of a near surface repository

Reference design of a near surface repository (NSR) for low- and intermediate-level short-lived radioactive waste has been accomplished in 2002. Candidate sites for a NSR has been identified in 2003. Environmental Impact Assessment for two candidate sites has been performed in 2004. It is foreseen to complete site selection, necessary investigations and draft recommendations on construction of NSR in 2006.

Comment #420: Landfill repository for very low level radwaste

Development of documents concerning site, design and construction of a landfill repository for very low level radioactive waste is in progress. The licensed landfill will be constructed on Ignalina NPP site.

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

Comment #421: Generic WAC and requirements for WPS

Generic waste acceptance criteria (WAC) for conditioned LILW candidate for near surface disposal and requirements for waste package specifications (WPS) have been approved by the State Nuclear Power Safety Inspectorate in 2003 (see P-2003-01, our Reference No 9).

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	No
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Attachment #1158: Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste

File name: Regulation on Disposal of LILW.doc

File type: MS Office Document

Member State's Reference # 4

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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)	Yes
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Comment #423: Regulation on the Pre-Disposal Management

See attachment No. 175 at Policies/National Systems/Responsibilities
"Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant"

Comment #7449: RMI waste

Lithuania's Radioactive Waste Management Agency has applied for a PHARE project to establish the central institutional waste processing and buffer storage facility based on the Feasibility Study performed. Construction of the new facility at Maisiagala site will ensure the proper treatment and conditioning, and safe and secure buffer storage of the institutional radioactive waste.

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

Comment #424: Centralized RMI waste processing facility

Feasibility study to establish a centralized RMI waste processing facility at Maisiagala has been performed. The material of this study shall be used as the input for a tendering process for construction of facility to be done within the expected upcoming IAEA project and Phare project.

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

Spent SRS

Policies

	Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

Comment #427: A national level registry

A national level registry of all Lithuania's SRS is administrated and supervised by Radiation Protection Center. Radioactive Waste Management Agency (RATA) have another national level registry of spent SRS transfered or to be transfered to RATA as radioactive waste.

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

	Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Comment #428: Disposed disused SRS

Disused SRS have been disposed of in “Radon” type radioactive waste disposal facility near Maisiagala before 1989.

Comment #429: Management of disused SRS

Disused SRS are managed separately from other radioactive waste.

Comment #430: Spent SRS with long-lived radionuclides

These disused radioactive sealed sources that could not be reused or sent back to the supplier are treated without the final immobilization until the WAC for a deep geological repository are established.

Attachment #1159: Normative document of environmental protection of the Rebublic of Lithuania "Clearance Levels of Radionuclides, Conditions of Reuse of Materials and Disposal of Waste".

File name: LAND 34-2000_angl.doc

File type: MS Office Document

Member State's Reference # 6

Import-Export

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

Comment #431: Prohibition on import of radwaste

See Article 42 of the Law on Nulear Energy

Comment #432: Re-entry of disused SRS

Pursuant to Article 30 of the Law on Radioactive Waste Management, a return into Lithuania of disused SRS is permitted, if they are intended for the legal person who manufactured them and who is authorized to receive and keep the disused SRS.

Attachment #1160: Law on Nuclear Energy

File name: Law_on_Nuclear_Energy.doc

File type: MS Office Document

Member State's Reference # 5

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

Comment #433: Import of SNF

According to Article 2 of the Law on Nuclear Energy: "Radioactive waste - spent nuclear fuel and other radioactive materials the further technological use whereof is either not advisable or impossible".
According to Article 42 of the Law on Nuclear Energy: "It shall be prohibited to import radioactive waste into the territory of the Republic of Lithuania".

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)

97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - All

Comment #439: Law on INPP Decommissioning Fund

Ignalina NPP's decommissioning fund was established by the law No. IX-466 on July 12, 2001

Comment #7448: Ignalina NPP decommissioning

There is only one nuclear power plant in Lithuania – Ignalina NPP with two similar RBMK-1500 Units. The original design lifetime has been projected out to 2013-2017. The first Unit was shutdown at 31 December 2004, and second Unit will be shutdown in 2009 if funding for decommissioning is available from EU and other donors. Decommissioning of the Unit 1 will be implemented in accordance with the Immediate Dismantling Strategy.

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

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

Attachment #1161: General Requirements for Decommissioning of Ignalina NPP

File name: VATESI_VD-EN-01-99_Decommiss.doc

File type: MS Office Document

Member State's Reference # 7

Country Waste Profile Report for

Malaysia

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

This page generated at 2007-05-31 09:52:46 (local Vienna time.)

Waste Class Matrix(ces) Used/Defined

Country: Malaysia Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #387: use of the IAEA matrix

Malaysia does not have an official classification of waste and waste class matrices. However, there is an NEWMDB provision which says that in the absence of national standards, Member States can use the Agency's standard as a reference. Malaysia is taking advantage of this provision for reporting to the NEWMDB.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Malaysia Reporting Year: 2005

Reporting Group: **MINT**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Malaysian Institute for Nuclear Technology Research

Site Name	Facility Name	Facilities Defined		
LTSF	LTSF		storage	
	EC1			disposal
MINT-RWMC	LLETP	processing		
	RWMC-SF		storage	

Attachment #1210: SRS list - provided as an interim measure (SRS not categorized according to Agency SRS categories, plus Agency scheme under revision)

File name: SRS.xls

File type: MS Office Document

Reporting Group MINT, Site Structure: MINT-RWMC

Country: Malaysia Reporting Year: 2005

Full Name: Malaysian Institute for Nuclear Technology Research - Radwaste Management Centre

License Holder(s) : Unlicensed - MINT is responsible for the site

The following list the waste management facilities that are located at this site.

Facility: LLETP

Description	Low Level Effluent Treatment Plant, Block 31

Processing part of the "LLETP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1984

Facility: RWMC-SF

Description	Radwaste Management Centre Storage Facility

Storage part of the "RWMC-SF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Block 33	building	2002	No	No	No	Yes

Reporting Group MINT, Site Data: MINT-RWMC

Country: Malaysia Reporting Year: 2005

Full Name: Malaysian Institute for Nuclear Technology Research - Radwaste Management Centre

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage LLETP Solid	No	0.025	0	0	0	100	0	0	0	No
LILW-SL	Storage RWMC-SF Solid	No	3.62	0	0	0	100	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			decrease	
Compaction			same	

Processing - Conditioning method(s)

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

REGULATORS

Country: Malaysia Reporting Year: 2005

Name	AELB
Full Name	Ministry of Science, Technology & Environment
Division	Atomic Energy Licensing Board
City or Town	Dengkil, Selangor

Name	MoH
Full Name	Ministry of Health
Division	Engineering Services Division
City or Town	Kuala Lumpur

REGULATIONS / LAWS

Country: Malaysia Reporting Year: 2005

Name	ACT304	
Title or Name	Atomic Energy Licensing Act, 1984 or Act 304	
Reference Number		
Date Promulgated or Proclaimed	1984-06-28	Law

Name	Licensing	
Title or Name	Radiation Protection (Licensing) Regulations 1986	
Reference Number	P.U. (A) 149	
Date Promulgated or Proclaimed	1986-05-01	Regulation

Name	BSS	
Title or Name	Radiation Protection (Basic Safety Standards) Regulations 1988	
Reference Number	P.U. (A) 61	
Date Promulgated or Proclaimed	1988-03-03	Regulation

Name	Transport	
Title or Name	Radiation Protection (Transport) Regulations 1989	
Reference Number		
Date Promulgated or Proclaimed	1989-01-01	Regulation

Name	Appeal	
Title or Name	Atomic Energy Licensing (Appeal) Regulations 1990	
Reference Number	LPTA (s): TAD/016/3; PN.(PU2)425	
Date Promulgated or Proclaimed	1990-06-13	Law

REGULATIONS / LAWS

Country: Malaysia Reporting Year: 2005

Name	Lightning	
Title or Name	Atomic Energy Licensing (Exemption) (Lightning Arrester) Order 1990	
Reference Number	LPTA. (S) TAD/016/3; PN.(PU2)425/III	
Date Promulgated or Proclaimed	1990-01-02	Regulation

Name	Smoke	
Title or Name	Atomic Energy Licensing (Exemption) (Smoke Detectors) Order 1989	
Reference Number	LPTA.(S): TAD/016/1 Klt. 2; PN.(PU2) 425	
Date Promulgated or Proclaimed	1989-11-15	Regulation

Name	EEZ	
Title or Name	Economic Exclusive Zone (Application of Atomic Energy Licensing Act 1984) Order	
Reference Number	PM. (R) 11880/A/024/14; PN.(PU2) 428; P.U.(A) 175	
Date Promulgated or Proclaimed	1990-06-04	Regulation

Name	Ceramic	
Title or Name	Atomic Energy Licensing (Exemption) (Ceramic Factory) Order 1998	
Reference Number	P.U. (A) 431	
Date Promulgated or Proclaimed	1998-11-26	Regulation

Name	Amang	
Title or Name	Atomic Energy Licensing (Exemption) (Small Amang Factory) Order 1994	
Reference Number	P.U. (A) 435	
Date Promulgated or Proclaimed	1994-11-03	Regulation

REGULATIONS / LAWS

Country: Malaysia Reporting Year: 2005

Name	Low Activ	
Title or Name	Atomic Energy Licensing (Exemption) (Low Activity Radioactive Material) Order 2002	
Reference Number	P.U.(A) 182	
Date Promulgated or Proclaimed	2002-03-27	Regulation

Name	5 Kev	
Title or Name	ATOMIC ENERGY LICENSING (EXEMPTION) (SCANNING ELECTRON MICROSCOPE) ORDER 1998	
Reference Number	P.U. (A) 432	
Date Promulgated or Proclaimed	1998-10-26	Regulation

MILESTONES

Country: Malaysia Reporting Year: 2005

Start Year or Reference Year:	1976	End Year	2000

Description of Milestone

1968 - Radioactive Substances Act was established under the purview of Ministry of Health.
1976 - The establishment of MINT (then was known as PUSPATI)
1982- The TRIGA MARK II reactor reached criticality
1984- The Radioactive Waste Management Centre started to operate; Facilities available were Low Level Effluent Treatment Plant and a Building comprising of Laboratory, Laundry, Intermediate level (Liquid and Solid) preparation Rooms and Decontamination facility and administrative office.
1984 - Atomic Energy Licensing Act or Act 304 was established under the Ministry of Science, Technology and the Environment (MOSTE). Under this Act there are two regulatory authorities. The Ministry of Health for Medical Application practices, whereas the MOSTE regulates non-medical activities.
1985 - the Atomic Energy Licensing Board (AELB) was established under the MOSTE to act as the regulatory authority.

Policies

Country: Malaysia | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	No
7	implemented controls over radioactive waste generation	Partially
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
9	taken into account interdependencies among all steps in radioactive waste generation and management	Partially
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Partially
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Incomplete
21	implement the licensing process	Incomplete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	

Policies

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Incomplete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	No
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	No
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	No

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case” approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Malaysia **Disposal Facilities** Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

Registration (Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

Agreements (Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	Yes
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	No

Policies

Country: Malaysia | **Spent SRS** | Reporting Year: 2005

89	Has your Country implemented dedicated disposal facilities for spent SRS?	No
90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

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

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

Country Waste Profile Report for

Mexico

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:22:46

Waste Class Matrix(ces) Used/Defined

Country: Mexico (United Mexican States) Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: NOM-4-NUCL

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
NB A	100	0	0
NB B	100	0	0
NB C	100	0	0
INTERMEDIO	0	100	0
ALTO NIVEL	0	0	100

Description: Mexican Official Norm NOM-004-NUCL-1994 Classification of Radioactive Waste

Attachment #1173: Description of Mexican classification and discussion of the relation with IAEA´s scheme

File name: DESCRIPTION OF CLASSIFICATION.pdf

File type: PDF Document

Member State's Reference # MEX DESCRIPTION AND DISCUSSION

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Mexico (United Mexican States) Reporting Year: 2005

Reporting Group: **CFE-CLV**

Inventory Reporting Date: December 2005

Waste Matrix Used: NOM-4-NUCL

Description: Comision Federal de electricidad, Central Laguna Verde

Site Name	Facility Name	Facilities Defined		
CLV	TPCLV	processing		
	ATS		storage	
	CLVACG1		storage	
	CLVACG2		storage	
	DDRSS		storage	

Reporting Group: **ININ**

Inventory Reporting Date: December 2005

Waste Matrix Used: NOM-4-NUCL

Description: Instituto Nacional de Investigaciones Nucleares (Nuclear Research National Institute)

Site Name	Facility Name	Facilities Defined		
ININ-CADER	CADER		storage	
	CADER(T)		storage	
ININ-CN	PATRADER	processing		
PIEDRERA	PIEDRERA			disposal

Reporting Group: **SENER**

Inventory Reporting Date: December 2005

Waste Matrix Used: NOM-4-NUCL

Description: Secretaria de Energía (Energy Secretariat)

Site Name	Facility Name	Facilities Defined		
ADDER	ADDER			disposal

Reporting Group CFE-CLV, Site Structure: CLV

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: Central Laguna Verde (Laguna Verde Nuclear Power Plant)

License Holder(s) : Comision Federal de Electricidad (Electricity Federal Commission)
Km. 46.5, carreter federal 180, Alto Lucero, Veracruz

The following list the waste management facilities that are located at this site.

Facility: TPCLV

Description	In Plant Radioactive Waste Treatment,Central Laguna Verde

Processing part of the "TPCLV" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	No	No	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1989

Facility: ATS

Description	In site Radioactive Waste Storage (wet radioactive waste storage)

Storage part of the "ATS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	Yes	Yes	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	No	No			
List SRS?	No				
Capacity	ATS has a remaining capacity of 46 high integrity containers, (2 years to saturation).				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ATS	bunker	1989	No	No	Yes	No

Comment #7283: Raised capacity

Capacity declared for ATS, takes into account in process layout and piling rearrangements of HIC´s and drums in the facility.

Reporting Group CFE-CLV, Site Structure: CLV

Country: Mexico (United Mexican States) Reporting Year: 2005

Facility: CLVACG1

Description	Spent fuel pool Unit 1

Storage part of the "CLVACG1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	No	No	NB B	No	No
NB C	No	No	INTERMEDIO	Yes	No
ALTO NIVEL	Yes	Yes			
SRS	No	No			

List SRS?	No
Capacity	Enough capacity for the lifetime of Laguna Verde Nuclear Power Plant Unit 1 (BWR Mark II)

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CLVACG1	pool	1989	No	No	No	No

Facility: CLVACG2

Description	Spent fuel pool Unit 2

Storage part of the "CLVACG2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	No	No	NB B	No	No
NB C	No	No	INTERMEDIO	Yes	No
ALTO NIVEL	Yes	Yes			
SRS	No	No			

List SRS?	No
Capacity	Enough capacity for the lifetime of Laguna Verde Nuclear Power Plant Unit 2 (BWR Mark II)

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CLVACG2	pool	1995	No	No	No	No

Reporting Group CFE-CLV, Site Structure: CLV

Country: Mexico (United Mexican States) Reporting Year: 2005

Facility: DDRSS

Description	Solid dry radioactive waste storage

Storage part of the "DDRSS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	Yes	Yes	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	No	No			
List SRS?	No				

Capacity	DDRSS has a remaining capacity for 250 drums (aproximated saturation time, 1.3 years)

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DDRSS	building	1993	No	No	No	No

Comment #7282: Supercompaction

There are plans for raising capacity of DDRSS by means of volume reduction via super compaction, which, at a ratio of 3:1, will give DDRSS enought capacity for up to 7 years.

Reporting Group CFE-CLV, Site Data: CLV

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: Central Laguna Verde (Laguna Verde Nuclear Power Plant)

Inventory Reporting Date: December 2005 Waste Matrix: NOM-4-NUCL

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
NB A	Storage DDRSS	No	494.82	100	0	0	0	0	0	0	No
NB A	Storage ATS	Yes	1599	100	0	0	0	0	0	0	No
NB A	Storage DDRSS	Yes	1560.48	100	0	0	0	0	0	0	No
INTERMEDIO	Storage CLVACG1	No	12	100	0	0	0	0	0	0	No
INTERMEDIO	Storage CLVACG2	No	8.5	100	0	0	0	0	0	0	No

Waste Class	Status
ALTO NIVEL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			same	
Decontamination	Yes			
Evaporation			decrease	
Filtration			same	
Ion Exchange			same	
Membrane Technology	Yes			
Metal Melting		Yes		
Super Compaction	Yes			
Wastewater Treatment	Yes			

Processing - Conditioning method(s)

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

Reporting Group ININ, Site Structure: ININ-CADER

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name:	Instituto Nacional de Investigaciones Nucleares, Centro de Almacenamiento de Desechos Radiactivos (Radioactive Waste Storage Center)
License Holder(s) :	Instituto Nacional de Investigaciones Nucleares. Km. 36.5 Carretera Mexico-Toluca, Estado de MExico

The following list the waste management facilities that are located at this site.

Facility: CADER

Description	Centro de Almacenamiento de Desechos Radiactivos (Radioactive Waste Storage Center)

Storage part of the "CADER" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	Yes	No	NB B	Yes	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	Yes	No			
List SRS?	Yes				

Capacity	Almacen 1: 219 drums and 42 sources. Almacen 2: 770 drums. Almacen 3: 100 drums (remaining capacities)

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Almacen 1	building	1985	No	No	No	Yes
Almacen 2	building	1994	No	No	No	No
Almacen 3	building	1994	No	No	No	No

Comment #12112: Storage Facility CADER

Capacity for Almacen 2 decreased considerably from 1544 to 770, this is due to a change in the stacking of drums options, in 2005, a 4 stacking lines option was adopted instead of a 5 stacking lines option.

Facility: CADER(T)

Description	Trenches that are the result of a past waste disposal practice (this practice is now banned)

Storage part of the "CADER(T)" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	Yes	No	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	No	No			
List SRS?	No				

Capacity	Trenches are closed

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TR 0	trench (lined)	1978	Yes	Yes	No	No
TR 1	trench (lined)	1978	Yes	Yes	No	No
TR 3	trench (lined)	1978	Yes	Yes	No	No
TR 5	trench (lined)	1978	Yes	Yes	No	No
TR 7	trench (lined)	1978	Yes	Yes	No	No

Reporting Group ININ, Site Data: ININ-CADER

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: Instituto Nacional de Investigaciones Nucleares, Centro de Almacenamiento de Desechos Radiactivos (Radioactive Waste Storage Center)

Inventory Reporting Date: December 2005 Waste Matrix: NOM-4-NUCL

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
NB A	Storage CADER	Yes	37.4	0	0	0	100	0	0	0	No
NB B	Storage CADER	No	20.94	0	0	0	19	0	81	0	No
NB B	Storage CADER	Yes	375.4	0	0	0	100	0	0	0	No

Comment #9801: Increased capacity of CADER

In 2004 no drums were received in the CADER, however, the storage capacity of radioactive waste increased slightly in 2004, this is due to the fact that some segregation activities were carried out as a consequence of repackaging radioactive waste from deteriorated drums to new ones, (clearance criteria were applied), probably this segregation activity will span one or two more years.more.

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Co-60	152	578	1	Yes	Yes	0	5.45E+05	
	4.00E+00	4.72E+05	7.30E+04					
Cs-137	136	873		Yes	Yes	0	1.60E+05	
	2.10E+01	1.60E+05						
Sr-90	69			Yes	No	0	4.30E+01	
	4.30E+01							
Kr-85	55			Yes	No	0	1.60E+02	
	1.60E+02							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241	12	123	Yes	No	0	1.60E+04	
	7.40E+00	1.60E+04					
Am-241	1205		Yes	No	0	1.00E+03	
	1.00E+03						
Ra-226	1132		Yes	Yes	0	8.20E+01	
	8.20E+01						

Reporting Group ININ, Site Structure: ININ-CN

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name:	Instituto Nacional de Investigaciones Nucleares-Centro Nuclear (Nuclear Research National Institute - Nuclear Centre)
License Holder(s) :	Instituto Nacional de Investigaciones Nucleares (Nuclear Research National Institute)

The following list the waste management facilities that are located at this site.

Facility: PATRADER

Description	Planta de Tratamiento de Desechos Radiactivos (Radioactive Waste Treatment Plant)

Processing part of the "PATRADER" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	No	No	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
SRS	Yes	No			
List SRS?	Yes				

Type	treatment, conditioning
Year opened	1970

Reporting Group ININ, Site Data: ININ-CN

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: Instituto Nacional de Investigaciones Nucleares-Centro Nuclear (Nuclear Research National Institute - Nuclear Centre)

Inventory Reporting Date: December 2005 Waste Matrix: NOM-4-NUCL

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Chemical Precipitation			same	
Compaction			same	
Decontamination			same	
Filtration			same	

Processing - Conditioning method(s)

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

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Pm-147	1			Yes	No	0	4.40E-03	
	4.40E-03							
Na-22	2			Yes	No	0	2.00E-04	
	2.00E-04							
Po-210	19			Yes	No	0	9.65E-05	
	9.65E-05							
Cm-244	16			Yes	No	0	2.20E+01	
	2.20E+01							
Cf-252	15			Yes	No	0	7.03E+00	
	7.03E+00							
Sr-90		37		Yes	No	0	7.79E+03	
		7.79E+03						
Co-60		59		Yes	No	0	3.44E+04	
		3.44E+04						
Cs-137	257			Yes	Yes	0	7.38E+02	
	7.38E+02							
Ir-192		36		Yes	No	0	3.88E+03	
		3.88E+03						
Kr-85		26		Yes	No	0	3.37E+04	
		3.37E+04						
Bi-210	1			Yes	No	0	1.50E-07	
	1.50E-07							
Ba-133	10			Yes	No	0	2.81E-05	
	2.81E-05							
Cd-109	8			No	Yes	0	1.53E-01	
	1.53E-01							
Cf-252	6			No	Yes	0	5.93E+00	
	5.93E+00							

Reporting Group ININ, Site Data: ININ-CN

Country: Mexico (United Mexican States) Reporting Year: 2005

Co-57	12			No	Yes	0	1.15E+00	
	1.15E+00							
Fe-55	11			No	Yes	0	1.34E+00	
	1.34E+00							
Pb-210	2			No	Yes	0	2.70E-04	
	2.70E-04							
Th-228	1			Yes	No	0	7.70E-05	
	7.70E-05							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241 Neutron Gen.		7	Yes	No	0	2.20E+02	
		2.20E+02					
Am-241		72	Yes	No	0	7.99E+03	
		7.99E+03					
Pu-239	2		No	Yes	0	5.10E-06	
	5.10E-06						
Pu-238	6		No	Yes	0	1.01E+01	
	1.01E+01						
U-238	1		No	Yes	0	4.20E-06	
	4.20E-06						
Bi-207	1		No	Yes	0	1.50E-07	
	1.50E-07						
Ni-63	2		No	Yes	0	5.81E-02	
	5.81E-02						
C-14	7		No	Yes	0	1.50E-05	
	1.50E-05						
Th-232	3		Yes	No	0	1.80E-04	
	1.80E-04						
Th-230	8		Yes	No	0	4.00E-07	
	4.00E-07						
Ra-226	17		No	Yes	0	2.78E+00	
	2.78E+00						

Multiple Nuclides Spent Sources in storage Waste data available, will not be reported

Reporting Group ININ, Site Structure: PIEDRERA

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: LA PIEDRERA Radiaoctive Waste Disposal Facility

License Holder(s) : Licensing in process (Institutional Control)
Responsible Entity: ININ (Nuclear Research National Institute)

The following list the waste management facilities that are located at this site.

Facility: PIEDRERA

Description	LA PIEDRERA Radioactive Waste Disposal Facility

Disposal part of the "PIEDRERA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	Yes	No	NB B	No	No
NB C	No	No	INTERMEDIO	No	No
ALTO NIVEL	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	20858	Capacity -planned (m3)	20858
Depth (m)	5		
Host medium	crystalline rock (basalt)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1985	1985
site selection		1985	1985
design		1985	1985
construction		1985	1986
commissioning		1985	1986
operation		1985	1986
closure		1986	1986
institutional control		1998	2038

Comment #7297: Radioactive Waste Disposed

Only the radioactive waste originated in 1983 from the accident with a Co-60 source at Ciudad Juarez, is disposed in this facility.

Reporting Group ININ, Site Data: PIEDRERA

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: LA PIEDRERA Radiaoctive Waste Disposal Facility

Inventory Reporting Date: December 2005 Waste Matrix: NOM-4-NUCL

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
NB A	Disposal PIEDRERA	Yes	20858	0	0	0	0	0	100	0	No

Reporting Group SENER, Site Structure: ADDER

Country: Mexico (United Mexican States) Reporting Year: 2005

Full Name: Almacen Definitivo de Desechos Radiactivos de Nivel Bajo (Low Level Radioactive Waste Disposal Facility), provitional name

License Holder(s) : No licence

The following list the waste management facilities that are located at this site.

Facility: ADDER

Description	Almacen Definitivo de Desechos Radiactivos de Bajo Nivel (Low Level Radioactive Waste Disposal Facility)

Disposal part of the "ADDER" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
NB A	No	Yes	NB B	No	Yes
NB C	No	Yes	INTERMEDIO	No	No
ALTO NIVEL	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	not specified
Depth (m)			
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1993	

REGULATORS

Country: Mexico (United Mexican States) Reporting Year: 2005

Name	CNSNS GSR
Full Name	Comision Nacional de Seguridad Nuclear y Salvaguardias (Nuclear and Safeguards National Comission)
Division	Gerencia de Seguridad Radiologica (Radiological Safety Manager Office)
City or Town	Mexico D.F.

Name	CNSNS GSN
Full Name	Comision Nacional de Seguridad Nuclear y Salvaguardias (Nuclear and Safeguards National Commission)
Division	Gerencia de Seguridad Nuclear (]Nuclear Safety Manager Office)
City or Town	Mexico D.F.

REGULATIONS / LAWS

Country: Mexico (United Mexican States) Reporting Year: 2005

Name	LEY 27	
Title or Name	Ley Reglamentaria del Articulo 27 Constitucional en Materia Nuclear (Nuclear Matters Law of Constitutional Article 27)	
Reference Number		
Date Promulgated or Proclaimed	1984-02-04	Law

Comment #5191: Wastes that are regulated by the Law

Matrix NOM-4-NUCL - ALTO NIVEL, INTERMEDIO, NB A, NB B, NB C

Name	RGSR	
Title or Name	Reglamento General de Seguridad Radiologica (Radiological Safety General Regulation)	
Reference Number		
Date Promulgated or Proclaimed	1988-11-22	Regulation

Comment #5192: Wastes that are regulated by the Regulation

Matrix NOM-4-NUCL - ALTO NIVEL, INTERMEDIO, NB A, NB B, NB C

Name	004-NUCL	
Title or Name	RADIOACTIVE WASTE CLASSIFICATION	
Reference Number	NOM-004-NUCL-1994	
Date Promulgated or Proclaimed	1996-03-04	Regulation

Comment #5193: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - ALTO NIVEL, INTERMEDIO, NB A, NB B, NB C

Name	018-NUCL	
Title or Name	Methods for assessing the concentration and total activity in radioactive waste packages	
Reference Number	NOM-018-NUCL-1996	
Date Promulgated or Proclaimed	1996-08-12	Regulation

Comment #5194: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - ALTO NIVEL, INTERMEDIO, NB A, NB B, NB C

Name	019-NUCL	
Title or Name	Acceptance criteria for waste packages for disposal of low level radioactive waste in near surface facilities	
Reference Number	NOM-019-NUCL-1995	
Date Promulgated or Proclaimed	1996-08-14	Regulation

Comment #5195: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - NB A, NB B, NB C

REGULATIONS / LAWS

Country: Mexico (United Mexican States) Reporting Year: 2005

Name	020-NUCL	
Title or Name	Requirements for radioactive waste incineration facilities	
Reference Number	NOM-020-NUCL-1995	
Date Promulgated or Proclaimed	1996-08-15	Regulation

Name	021-NUCL	
Title or Name	Leach tests for solid samples of radioactive waste	
Reference Number	NOM-021-NUCL-1996	
Date Promulgated or Proclaimed	1997-08-04	Regulation

Comment #403: Restriction of applicability

NOM-021-NUCL-1996 applies to Low Level Radioactive Waste Class A (NB A) only when these wastes are deposited in the same disposal cell than Low Level Radioactive Waste Class B (NB B)

Comment #5197: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - NB B, NB C

Name	022-NUCL-1	
Title or Name	Requirements for Near surface radioactive waste disposal facilities. Part 1, Site	
Reference Number	NOM-022/1-NUCL-1996	
Date Promulgated or Proclaimed	1997-09-05	Regulation

Comment #5198: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - NB A, NB B, NB C

Name	022-NUCL-2	
Title or Name	Requirements for Near surface Radioactive waste disposal facilities. Part 2, Design	
Reference Number	NOM-022/2-NUCL-1996	
Date Promulgated or Proclaimed	1997-09-05	Regulation

Comment #5199: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - NB A, NB B, NB C

REGULATIONS / LAWS

Country: Mexico (United Mexican States) Reporting Year: 2005

Name	022-NUCL-3	
Title or Name	Requirements for Near surface Radioactive waste disposal facilities. Part 3, Operations and Closure	
Reference Number	NOM-022/3-NUCL-1996	
Date Promulgated or Proclaimed	1999-01-14	Regulation

Comment #5200: Wastes that are regulated by the Norm

Matrix NOM-4-NUCL - NB A, NB B, NB C

Name	028-NUCL	
Title or Name	Radioactive Waste management in radioactive facilities with non-sealed radioactive sources	
Reference Number	NOM-028-NUCL-1996	
Date Promulgated or Proclaimed	1998-12-22	Regulation

Name	035-NUCL	
Title or Name	Clearance levels for radioactive material	
Reference Number	NOM-035-NUCL-2000	
Date Promulgated or Proclaimed	2000-05-19	Regulation

Name	036-NUCL	
Title or Name	Requirements for facilities for radioactive waste treatment and conditioning	
Reference Number	NOM-036-NUCL-2001	
Date Promulgated or Proclaimed	2001-09-26	Regulation

Policies

Country: Mexico (United Mexican States) | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Partially
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Partially
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	No
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	No
12	implemented formal mechanisms for disseminating information to the public and for public consultation	No

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Partially
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	No

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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
If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below		

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.		
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Mexico (United Mexican States) **Disposal Facilities** Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Policies

Country: Mexico (United Mexican States) **Processing/Storage** Reporting Year: 2005

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

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

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No

Policies

Country: Mexico (United Mexican States) **Spent SRS** Reporting Year: 2005

88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	No
89	Has your Country implemented dedicated disposal facilities for spent SRS?	No
90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

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

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

Country Waste Profile Report for Netherlands

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:23:07

Waste Class Matrix(ces) Used/Defined

Country: Netherlands, Kingdom of the Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: National

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LILW	90	10	0
LILW, NORM	100	0	0
LILW, depU	0	100	0
HLW, non heat producing	0	100	0
HLW, heat producing	0	0	100

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 catagories 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.

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 Class Matrix(ces) Used/Defined

Country: Netherlands, Kingdom of the Reporting Year: 2005

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	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.

Reporting Group COVRA, Site Structure: COVRA

Country: Netherlands, Kingdom of the Reporting Year: 2005

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

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

The following list the waste management facilities that are located at this site.

Facility: COVRA-AVG

Description	AVG, AfvalVerwerkingsGebouw (Waste Treatment Building) is the building at the COVRA site where low and intermediate level waste is treated and conditioned.

Processing part of the "COVRA-AVG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	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			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1992

Facility: COVRA-stor

Description	Separate storage buildings are present at the COVRA site for LILW (LOG), HLW (HABOG), NORM (COG) and for depleted U (VOG)

Storage part of the "COVRA-stor" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	LILW, NORM	Yes	Yes
LILW, depU	Yes	Yes	HLW, non heat producing	No	Yes
HLW, heat producing	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity	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.				

Types of Storage Units

Unit Name	Type	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

Reporting Group COVRA, Site Data: COVRA

Country: Netherlands, Kingdom of the Reporting Year: 2005

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

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW	Storage COVRA-stor	Yes	8660	55	0	0	45	0	0	0	No
LILW, NORM	Storage COVRA-stor	No	2150	0	0	0	0	0	0	100	No

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.

Class	Location Facility	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW, depU	Storage COVRA-stor	No	804	0	100	0	0	0	0	0	No
HLW, heat producing	Storage COVRA-stor	Yes	12	100	0	0	0	0	0	0	No

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 2 m3 of spent fuel from the research reactors at Petten and Delft is stored at COVRA.

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Comment #7369: Cementation and encapsulation

All LILW is brought into a cemented waste form for storage.
The spent fuel of the research reactors is encapsulated in a cannister filled with helium gas.

REGULATORS

Country: Netherlands, Kingdom of the Reporting Year: 2005

Name	VROM
Full Name	Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (Ministry of Housing, Spatial Planning and Environment)
Division	Directie Stoffen, Afvalstoffen, Straling (Directorate for Chemicals, Waste, Radiation protection) KernFysische Dienst (Nuclear Safety Department)
City or Town	Den Haag (The Hague)

Comment #5218: Wastes that are regulated by the Regulator

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

Name	EZ
Full Name	Ministerie van Economische Zaken (Ministry of Economic Affairs)
Division	Directoraat-Generaal voor Marktordening en Energie (Directorate-General for Markets and Energy)
City or Town	Den Haag (The Hague)

Comment #5219: Wastes that are regulated by the Regulator

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

Name	SZW
Full Name	Ministerie van Sociale Zaken en Werkgelegenheid (Ministry of Social Affairs and Employment)
Division	Directie Arbeidsveiligheid en -Gezondheid (Directorate for Safety and Health at Work)
City or Town	Den Haag (The Hague)

REGULATIONS / LAWS

Country: Netherlands, Kingdom of the Reporting Year: 2005

Name	Kew	
Title or Name	Kernenergiewet (Nuclear Energy Act)	
Reference Number	Staatsblad 82, 1963, last revised 2003	
Date Promulgated or Proclaimed	1963-02-21	Law

Comment #5220: Wastes that are regulated by the Law

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

Name	WMO-decree	
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	
Date Promulgated or Proclaimed	1987-08-31	Law

Comment #5221: Wastes that are regulated by the Law

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

MILESTONES

Country: Netherlands, Kingdom of the | Reporting Year: 2005

Start Year or Reference Year:	1950	End Year	1982
Description of Milestone			
Seadumping was used as disposal for LILW.			

Start Year or Reference Year:	1982	End Year	1992
Description of Milestone			
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: - 30% n.p.p. Borssele (EPZ) - 30% n.p.p. Dodewaard (GKN) - 30% Energy Research Foundation (ECN) - 10% the State of the Netherlands. 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.			

Start Year or Reference Year:	1984	End Year	1992
Description of Milestone			
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.			

Start Year or Reference Year:	1994	End Year	2003
Description of Milestone			
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.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
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: - the n.p.p. Dodewaard stopped the production of electricity in 1997; - the Energy Research Foundation (ECN) placed its nuclear activities in a special business unit (NRG) together with the nuclear activities of KEMA and therfore ECN was no longer interested to hold shares in COVRA; - liberalisation of the electricity market and therefore the n.p.p. Borsele focussed on core-business activities; - no important nuclear activities are expected in the foreseeable future. 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.			

Start Year or Reference Year:	2003	End Year	2130
Description of Milestone			
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.			

MILESTONES

Country: Netherlands, Kingdom of the Reporting Year: 2005

Start Year or Reference Year:	2006	End Year	2033
Description of Milestone			
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.			

Policies

Country: Netherlands, Kingdom of the | Reporting Year: 2005

National Systems

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

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)
2	Has your country developed strategies to implement a national policy?	Yes

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes

10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility		
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

Activities (Yes;Partially;No)

To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?

30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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

If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below

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.

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	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)
48	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

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

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)

Policies

Country: Netherlands, Kingdom of the **UMMT** Reporting Year: 2005

97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for Philippines

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-05-25 10:10:40

Waste Class Matrix(ces) Used/Defined

Country: Philippines, Republic of the Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #142: waste matrix status

currently under government approval to adopt IAEA classification

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				
processed				

Groups Overview

Country: Philippines, Republic of the

Reporting Year: 2005

Reporting Group: **PNRI**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Philippine Nuclear Research Institute

Site Name	Facility Name	Facilities Defined		
RPS	CWM&TF	processing	storage	

Reporting Group PNRI, Site Structure: RPS

Country: Philippines, Republic of the Reporting Year: 2005

Full Name: Radiation Protection Services

License Holder(s) : not a licensed site, responsible organization is the Philippine Nuclear Research Institute

The following list the waste management facilities that are located at this site.

Facility: CWM&TF

Description	Central Waste Management and Treatment Facility

Processing part of the "CWM&TF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1997

Storage part of the "CWM&TF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Trench A	trench (lined)	1997	No	No	Yes	Yes
Trench B	trench (lined)	2005	No	No	Yes	Yes

Reporting Group PNRI, Site Data: RPS

Country: Philippines, Republic of the — Reporting Year: 2005

Full Name: Radiation Protection Services

Inventory Reporting Date: December 2005 — Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	15	0	0	0	100	0	0	0	Yes
LILW-SL	Storage	Yes	1	0	0	0	100	0	0	0	Yes
LILW-LL	Storage	No	3	40	0	0	60	0	0	0	Yes
LILW-LL	Storage	Yes	2	0	0	0	100	0	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			decrease	
Compaction			decrease	
Ion Exchange			decrease	

Processing - Conditioning method(s)

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

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Tl-204	6			No	Yes	5	6.94E-04	2005.12 (estimate)
	6.94E-04							
Sr-90	47			No	Yes	5	5.19E+00	2005.12 (estimate)
	5.19E+00							
Sr-90	34			Yes	No	5	2.07E+00	2005.12 (estimate)
	2.07E+00							
Pm-147	12			No	Yes	0	3.17E-04	2005.12 (estimate)
	3.17E-04							
Ir-192	5			No	Yes	5	2.32E-04	2005.12 (estimate)
	2.32E-04							
H-3	11			No	Yes	5	2.58E+01	2005.12
	2.58E+01							
H-3	4			Yes	No	5	6.26E+00	2005.12 (estimate)
	6.26E+00							
Co-57	1			No	Yes	0	6.84E-03	2005.12 (estimate)
	6.84E-03							
Cf-252 Neutron Gen.	4			No	Yes	4	1.36E-01	2005.12 (estimate)
	1.36E-01							
Fe-55	2			Yes	No	0	5.67E-04	2005.12 (estimate)
	5.67E-04							
Cs-137			1	Yes	No	1	4.07E+04	2005.12 (estimate)
			4.07E+04					

Reporting Group PNRI, Site Data: RPS

Country: Philippines, Republic of the Reporting Year: 2005

Cs-137		24		No	Yes	3	2.80E+02	2005.12 (estimate)
		2.80E+02						
Cs-137		42		Yes	No	3	7.02E+02	2005.12 (estimate)
		7.02E+02						
Cs-137		1		Yes	No	2	1.36E+04	2005.12 (estimate)
		1.36E+04						
Cs-137	1			Yes	No	0	2.26E-06	2005.12 (estimate)
	2.26E-06							
Cs-137	5			No	Yes	0	8.92E-04	2005.12 (estimate)
	8.92E-04							
Co-60		2		No	Yes	1	8.00E+04	2005.12 (estimate)
		8.00E+04						
Co-60		1		Yes	No	1	3.70E+04	2005.12 (estimate)
		3.70E+04						
Co-60		1		Yes	No	3	1.26E+01	2005.12 (estimate)
		1.26E+01						
Co-60		2		No	Yes	3	1.33E+02	2005.12 (estimate)
		1.33E+02						
Co-60		8		No	Yes	2	8.21E+04	2005.12 (estimate)
		8.21E+04						
Co-60		8		Yes	No	2	5.04E+04	2005.12 (estimate)
		5.04E+04						
Co-60	20			No	Yes	0	1.67E-04	2005.12 (estimate)
	1.67E-04							
Co-60	1			Yes	No	0	3.78E-05	2005.12 (estimate)
	3.78E-05							
Tl-204	1			Yes	No	5	1.07E-04	2005.12 (estimate)
	1.07E-04							
Sr-90	25	4		No	Yes	4	6.19E+01	2005.12 (estimate)
	6.10E+00	5.58E+01						
Sr-90	44			Yes	No	4	2.60E+01	2005.12 (estimate)
	2.60E+01							
Pm-147	2			Yes	No	0	6.89E-04	2005.12 (estimate)
	6.89E-04							
Pm-147	2			Yes	No	5	3.95E+00	2005.12 (estimate)
	3.95E+00							
Pm-147	4			No	Yes	5	3.02E+00	2005.12 (estimate)
	3.02E+00							
Kr-85	4			No	Yes	5	4.62E-01	2005.12 (estimate)
	4.62E-01							
Kr-85	16	2		Yes	No	5	1.48E+01	2005.12 (estimate)
	4.02E+00	1.08E+01						
Cd-109	3			Yes	No	5	1.48E-01	2005.12 (estimate)
	1.48E-01							
Fe-55	4			No	Yes	5	1.36E+00	2005.12 (estimate)
	1.36E+00							
Fe-55	13			Yes	No	5	1.31E+00	2005.12 (estimate)
	1.31E+00							
Cs-137	7			No	Yes	5	2.22E+00	2005.12 (estimate)
	2.22E+00							
Cs-137	29			Yes	No	5	1.51E+01	2005.12 (estimate)
	1.51E+01							

Cs-137	23	4		Yes	No	4	5.83E+01	2005.12 (estimate)
	3.88E+01	1.95E+01						
Cs-137	23			No	Yes	4	2.63E+01	2005.12 (estimate)
	2.63E+01							
Co-60	26			No	Yes	5	8.77E-01	2005.12 (estimate)
	8.77E-01							
Co-60	32			Yes	No	5	1.80E+00	2005.12 (estimate)
	1.80E+00							
Co-60	9			No	Yes	4	5.28E+00	2005.12 (estimate)
	5.28E+00							
Co-60	2			Yes	No	4	2.87E+00	2005.12 (estimate)
	2.87E+00							
Cd-109	2			Yes	No	0	1.64E-04	2005.12 (estimate)
	1.64E-04							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	1		No	Yes	0	5.47E-04	2005.12
	5.47E-04						
Am-241		3	No	Yes	5	1.05E+01	2005.12 (estimate)
		1.05E+01					
Ra-226		2	Yes	No	4	5.11E+00	2005.12 (estimate)
		5.11E+00					
Am-241	890		No	Yes	5	5.37E+00	2005.12 (estimate)
	5.37E+00						
Ra-226	157		Yes	No	4	2.84E+01	2005.12 (estimate)
	2.84E+01						
Ra-226	111		Yes	No	5	2.81E+00	2005.12 (estimate)
	2.81E+00						
Pu-238	11		No	Yes	4	1.17E+01	2005.12 (estimate)
	1.17E+01						
Ni-63	347		No	Yes	5	7.89E-01	2005.12 (estimate)
	7.89E-01						
Am-241	11		Yes	No	5	5.30E+00	2005.12 (estimate)
	5.30E+00						
Am-241		1	No	Yes	3	1.79E+02	2005.12 (estimate)
		1.79E+02					
Am-241		4	No	Yes	4	1.11E+02	2005.12 (estimate)
		1.11E+02					

Multiple Nuclides Spent Sources in storage

Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
Am-241	5.870E+00	No	Yes	4	2005.12 (estimate)
Cs-137	1.050E+00				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
Am-241	2.270E+01	Yes	No	4	2005.12 (estimate)
Cs-137	1.780E+00				

Reporting Group PNRI, Site Data: RPS

Country: Philippines, Republic of the Reporting Year: 2005

REGULATORS

Country: Philippines, Republic of the Reporting Year: 2005

Name	PNRI
Full Name	Philippine Nuclear Research Institute
Division	Nuclear Regulations, Licensing and Safeguards Division
City or Town	Quezon City

REGULATIONS / LAWS

Country: Philippines, Republic of the Reporting Year: 2005

Name	CPRPart3	
Title or Name	Standards for Radiation Protection	
Reference Number	PNRI CPR PART 3	
Date Promulgated or Proclaimed	2004-09-06	Regulation

Name	CPR Part4	
Title or Name	Regulations for Safe Transport of Radioactive Material in the Philippines	
Reference Number	PNRI CPRPart4	
Date Promulgated or Proclaimed	2004-09-06	Regulation

Name	CPRPart23	
Title or Name	Licensing Requirements for Land Disposal of Radiactive Waste	
Reference Number	PNRICPRPart23	
Date Promulgated or Proclaimed	2004-05-09	Regulation

MILESTONES

Country: Philippines, Republic of the

Reporting Year: 2005

Start Year or Reference Year:	1996	End Year	1997
Description of Milestone			
Commissioning of the Centralized Facility for Radioactive Waste Management			

Start Year or Reference Year:	1998	End Year	1999
Description of Milestone			
Establishment of the National Registry of Radiation Sources			

Start Year or Reference Year:	1999	End Year	2001
Description of Milestone			
Radium Conditioning under the IAEA Advisory Involvement Scheme			

Start Year or Reference Year:	2004	End Year	2005
Description of Milestone			
Upgraded the security of the radioactive waste management facility and construction of new engineered trench with a capacity of approx. 300 cu.m. under the US-DOE project			

Policies

Country: Philippines, Republic of the | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	

24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	No
41	Environmental Impact Statement (EIS)	No
42	Performance Assessment (PA)	No
43	Quality Assurance (QA)	No
44	Safety Assessment (SA)	No

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

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	No
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)

Policies

Country: Philippines, Republic of the **Spent SRS** Reporting Year: 2005

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

	Procedures	(Yes;No)
78	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)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

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

Country Waste Profile Report for
Romania
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-05-24 13:26:28

Waste Class Matrix(ces) Used/Defined

Country: Romania Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #128: IAEA Matrix use

The use of IAEA Def. matrix is not required by any law or regulation.
The matrix is just being used to report-non-power wastes to the NEWMDB.

Waste Class Matrix: NPP waste

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
type 1	100	0	0
type 2	40	60	0
type 3	0	100	0

Description: type 1: nominal activity less than 7.5E09 Bq/m3 (1 nominal Bq is the emission of 1 photon/sec of 0.8 MeV energy); or gamma dose rate less than 2 mGy/h at container surface
type 2: nominal activity between 7.5E09 and 3.7E12 Bq/m3; or gamma dose rate between 2 mGy/h and 125 mGy/h at container surface
type 3: nominal activity higher than 3.7E12 Bq/m3; or gamma dose rate higher than 125 mGy/h at container surface

Comment #129: NPP types of waste

The NPP types of waste were established by the reference document of NPP RD-01364-RP1 (rev.3) "Solid Radioactive Waste Management Concept for Cernavoda NPP", approved by the regualtory authority (CNCAN) on 14 Nov.1994.

Comment #130: percentages in the NPP waste matrix

The percentages in the NPP waste matrix were estimated based on best knowledge of the waste (not on detailed analytical information).The percentages will be modified after more information will be available.

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	X			
processed		X	X	X

Comment #12223: Definitions for Unprocessed Waste and Processed W

According to NDR-01 regulations In Romania there is the following definition:Conditioning of radioactive waste - involves those operations that transform radioactive waste into a form suitable for handling, transport, storage and disposal. The operations may include immobilization of radioactive waste, placing the waste into containers and providing additional packaging.

Reporting Group Non-Power, Site Structure: NIPNE

Country: Romania | Reporting Year: 2005

Full Name: National Institute for Development&Research for Physics and Nuclear Engeneering - "Horia Hulubei"

License Holder(s) : NIPNE, General Director dr. Nicolae Victor Zamfir, tel.:+(4021)4042300, fax:+(4021)4574440

The following list the waste management facilities that are located at this site.

Facility: STDR-Mag

Description	Storage of LL spent sources and LILW-LL

Processing part of the "STDR-Mag" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
SRS	Yes	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1975

Storage part of the "STDR-Mag" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	Yes	Yes			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1975	No	No	Yes	Yes

Reporting Group Non-Power, Site Structure: NIPNE

Country: Romania Reporting Year: 2005

Facility: DNDR

Description	Disposal for LILW-SL and SL spent sources sited at Baita-Bihor, in a former uranium exploration mine (coastal gallery).

Disposal part of the "DNDR" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	rock cavern (mountain/hill)		
Facility is non modular			
Capacity - existing (m3)	5000	Capacity -planned (m3)	5000
Depth (m)	0-40 m		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1970	1972
site selection		1972	1975
design		1975	1977
construction		1978	1981
commissioning		1981	1985
operation	Yes	1985	2030
closure		2030	2035
institutional control		2035	2335

Reporting Group Non-Power, Site Data: NIPNE

Country: Romania Reporting Year: 2005

Full Name: National Institute for Development&Research for Physics and Nuclear Engeneering - "Horia Hulubei"

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	200	0	0	0	95	0	5	0	No

Comment #6610: The additional characteristics of the waste

Unprocessed: solid (non-dispersible)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	1404	30	0	0	70	0	0	0	No

Comment #6611: The additional characteristics of the waste

Processed: solid (non-dispersible)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-LL	Storage	No	6	0	0	0	100	0	0	0	No
LILW-LL	Storage	Yes	2.4	0	0	0	100	0	0	0	No

Comment #6612: The additional characteristics of the waste

Unprocessed: solid (non-dispersible)

Comment #12222: Waste Storage facilities/Class LILW-LL/Site NIPNE

The processed waste refers to the radium spent sealed radioactive sources conditioned for long term storage

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			suspended	
Compaction			same	
Decontamination			same	
Evaporation			suspended	
Filtration			suspended	
Incineration			same	
Ion Exchange			suspended	
Shredding and Compaction			same	

Comment #9745: Waste Treatment on Site NIPNE

The authorization of installation for the treatment of liquid radioactive waste was suspended by competent authority (CNCAN).
The owner of the installation has the intention to purchase a new liquid treatment installation.

Processing - Conditioning method(s)

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

Reporting Group Non-Power, Site Structure: NRI

Country: Romania Reporting Year: 2005

Full Name: Authonomus Company for Nuclear Activities - Nuclear Research Institute Pitesti

License Holder(s) : Authonomus Company for Nuclear Activities through Nuclear Research Institute Pitesti, Director prof.dr. Serban Constantin Valeca
tel.:+(40248)213400, fax:+(40248)262449

The following list the waste management facilities that are located at this site.

Facility: STDR-Pit

Description	Radioactive waste treatment facility for LILW-SL (solid&liquid radwaste)

Processing part of the "STDR-Pit" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	Yes			
List SRS?	No				

Type	treatment, conditioning
Year opened	1978

Facility: LEPI

Description	Post irradiation laboratory, storing fuel fragments and high activity spent sources. The sources are stored in pits sited in hot cells.

Storage part of the "LEPI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	Yes	Yes			
SRS	Yes	Yes			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Stor.cells	pit	1985	No	No	Yes	Yes

Reporting Group Non-Power, Site Data: NRI

Country: Romania Reporting Year: 2005

Full Name: Authonomus Company for Nuclear Activities - Nuclear Research Institute Pitesti

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	3	0	0	0	100	0	0	0	No
Comment #6614: The additional characteristics of the waste Unprocessed: solid (dispersible), solid (non-dispersible)											
LILW-LL	Storage	No	1.8	20	0	0	80	0	0	0	No
Comment #6615: The additional characteristics of the waste Unprocessed: solid (dispersible), solid (non-dispersible)											
HLW	Storage	No	0.025	100	0	0	0	0	0	0	No
Comment #6616: The additional characteristics of the waste Unprocessed: solid (dispersible), solid (non-dispersible)											

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination			same	
Evaporation			same	
Membrane Technology		Yes		

Processing - Conditioning method(s)

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

Reporting Group NPP, Site Structure: CNE - PROD

Country: Romania | Reporting Year: 2005

Full Name: National Company NUCLEARELECTRICA, CNE -PROD

License Holder(s) : National Company NUCLEARELECTRICA, CNE -PROD, General Director Theodor Chirica, tel.:+(401)3120800, fax:+(401)3120800

The following list the waste management facilities that are located at this site.

Facility: DIDR

Description	Storage facility for operational radioactive waste.

Storage part of the "DIDR" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
type 1	Yes	Yes	type 2	Yes	Yes
type 3	No	No			
SRS	No	No			

List SRS?	No
Capacity	1400 cubic meters

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DIDR	building	1996	No	No	No	No

Reporting Group NPP, Site Data: CNE - PROD

Country: Romania

Reporting Year: 2005

Full Name: National Company NUCLEARELECTRICA, CNE -PROD

Inventory Reporting Date: December 2005

Waste Matrix: NPP waste

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
type 1	Storage	No	237.98	100	0	0	0	0	0	0	No
Comment #6617: The additional characteristics of the waste Unprocessed: flammable, liquid (organic), resin, solid (dispersible), solid (non-dispersible)											
type 2	Storage	No	67.5	100	0	0	0	0	0	0	No
Comment #6618: The additional characteristics of the waste Unprocessed: flammable, liquid (organic), resin, solid (dispersible), solid (non-dispersible)											

REGULATORS

Country: Romania

Reporting Year: 2005

Name	CNCAN
Full Name	National Commission for Nuclear Activities Control
Division	Radiation Protection and Radioactive Waste Section
City or Town	Bucharest

Comment #6607: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP waste - type 1, type 2, type 3

REGULATIONS / LAWS

Country: Romania Reporting Year: 2005

Name	Law 111	
Title or Name	Law 111/1996 (as amended) on safe conduct of nuclear activities	
Reference Number	111/1996	
Date Promulgated or Proclaimed	1996-12-28	Law

Comment #6608: Wastes that are regulated by the Law

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP waste - type 1, type 2, type 3

Name	RSR-01	
Title or Name	Radiation Safety Fundamental Norms approved by the order of the President of National Commission for Nuclear Activities Control	
Reference Number	Order 14/2001	
Date Promulgated or Proclaimed	2000-08-29	Regulation

Comment #6609: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL; Matrix NPP waste - type 1, type 2, type 3

Name	NDR-01	
Title or Name	Fundamentals Norms for the Safe Management of Radioactive Waste	
Reference Number	president order no. 56/2004	
Date Promulgated or Proclaimed	2004-05-04	Regulation

Comment #9739: Regulation NFGSDR

The regulation NFGSDR is based on the IAEA Safety Series 111-F" The Principles of Radioactive Waste Management" and contains the principles of radioactive waste management as well as the requirements for fulfilling of these principles.

Name	NDR-02	
Title or Name	Norms for the clearance levels of radioactive originated by nuclear activities	
Reference Number	president order no. 62/2004	
Date Promulgated or Proclaimed	2004-05-04	Regulation

REGULATIONS / LAWS

Country: Romania Reporting Year: 2005

Name	Law 320	
Title or Name	Law no. 320/2003 on the management including disposal of nuclear spent fuel and radioactive waste	
Reference Number	Law no. 320/2003 on the approval of GO no. 11/2003	
Date Promulgated or Proclaimed	2003-07-22	Law

Comment #9738: Regulation 320/2003

The law establish the legislative framework for the management of nuclear spent fuel and radioactive waste . According to this law the National Agency for Radioactive Waste(ANDRAD) is set up. ANDRAD is an authority which has as the main role the coordination of at the national level of the process of safe management of nuclear spent fuel and radioactive waste resulted from operation of research reactors, nuclear power plants, decommissioning of nuclear and radiological facilities and of radioactive waste resulted from application of radiation in industry, medicine, etc.

Name	Law 105	
Title or Name	Law no. 105/1999 on the ratification of the Vienna Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management	
Reference Number	Law 105/1999	
Date Promulgated or Proclaimed	1999-06-16	Law

Name	NDR-03	
Title or Name	Norms on the classification of radioactive waste	
Reference Number	approved by order 156/2005	
Date Promulgated or Proclaimed	2005-07-04	Regulation

Name	NDR-04	
Title or Name	Norms on the limiting of effluents release into environment	
Reference Number	approved by order 221/2005	
Date Promulgated or Proclaimed	2005-09-09	Regulation

Policies

Country: Romania Reporting Year: 2005

National Systems

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

Comment #7422: national strategy

The national strategy has been approved by the Order of the Nuclear Agency President no. 844/2004 on the aprroval of the National strategy on medium and long term relating the management of nuclear spent fuel and radioactive waste, including disposal and decommissioning of nuclear and radiological facilities. this document establishes both strategy and policy of radioactive waste management.

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

Comment #7423: national strategy

The national strategy has been approved by the Order of the Nuclear Agency President no. 844/2004 on the aprroval of the National strategy on medium and long term relating the management of nuclear spent fuel and radioactive waste, including disposal and decommissioning of nuclear and radiological facilities. this document establishes both strategy and policy of radioactive waste management.

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	No
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Partially

Comment #315: funding of waste management and decommissioning

Law 111/1996 (as amended) requires the issuing of a law on radwaste management & decommissioning funds. The draft law is under review. It will establish the mechanism for funding waste management and decomissioning.

Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility

Policies

15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Incomplete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?		
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes

117	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

If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below

Comment #9740: Policies National Systems-Clearance

According to the NSR-01 the clearance levels are defined. The regulation NDR-02 on the clearance levels of materials originated from nuclear activities establises the methodologies for approving by competent authority of the conditional and uncondítonal clearance levels of materials arising from nuclear activities inclusing from decommissioning.

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - Some
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)

Does your country have written policies or written procedures for the following:

60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes

63	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)	Yes
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Spent SRS

	Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	Yes

Comment #9741: Policies Spent SRS-Registration

Each autorised waste management facility has own registry destinated only for the disused/spent sealed radioactive sources.

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

	Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes

84	Do any agreements include suppliers that are outside of your Country?	Yes

Comment #9743: Policies Spent SRS-Agreements

The import of sealed radioactive sources is issued to the authorised importers. The importers have to have the agreements with users in case the sealed sources become disused or spent sources. These agreement stipulate the obligation of the user to resent the spent sealed sources to the original supplyer or to transfer the spent sealed sources as radioactive waste to a authorised waste management facility.

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

Comment #9744: Policies Spent SRS-Release / Disposal

Th free relase of SRS are prohibited in Romania. Each SRS has to be transfered to an authorised waste management facility.
In Romania there is a disposal facility which can accomodate the SRS.

Import-Export

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

Comment #9742: Policies Import-Export-Radioactive Waste

According to the law 111/1996 the import of radioactive waste is prohibited.
According to the NDR-01 the export of radioactive waste is permited only into the countries which have technical and administrative capability and have the regulatory internal structure able to permit the safe management of radioactive waste.

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	No

Comment #310: decommmissioning fund

The draft law on waste management and decomissioning fund is under review. After entering into force of the law, the requirement for establishing of decommissioning fund will enter into force

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

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

Comment #318: Time frame for decommissioning

After the facility ceases to operate,it shall remain authorized. The costs for maintaining safety and protection, the liabilities, the availability of decomissioning techniques and waste management capabilities will establish the time frame for decommissioning. However, the decommissioning plan and the decommissioning authorization of nuclear installations shall include time frame for the various stages of decommissioning.

Country Waste Profile Report for Slovakia

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:26:00

Waste Class Matrix(ces) Used/Defined

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Attachment #1174: Development of Waste Classification Framework for Reporting Slovakian Waste Management Data to IAEA

File name: Development of Waste Classification Framework for Reporting Slovakian Waste Management Data to IAEA.doc

File type: MS Office Document

Attachment #1175: Transport regulation

File name: 198 po korekt AJ.doc

File type: MS Office Document

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Reporting Group: **01 RG**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Nuclear Regulatory Authority of the Slovak republic

Site Name	Facility Name	Facilities Defined		
NPP EBO	BTCC	processing		
	BSRSF	processing	storage	
	NPP V-1	processing	storage	
	NPP V-2	processing	storage	
	NPP A-1		storage	
NPP EMO	NPP EMO1,2		storage	
RU RAO	RU RAO			disposal

Reporting Group: **03 RG**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: VÚJE, Plc.- engineering, project and research organization

Site Name	Facility Name	Facilities Defined		
VÚJE	EBL	processing		
	ESL	processing		

Reporting Group 01 RG, Site Structure: NPP EBO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: NPP Jaslovske Bohunice

Location: Jaslovske Bohunice

License Holder(s) : Slovenske Elektrarne, a.s.
Hranicna 12
827 36 Bratislava 212

The following list the waste management facilities that are located at this site.

Facility: BTCC

Description	Bohunice Treatment and Conditioning Complex

Processing part of the "BTCC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1999

Facility: BSRSF

Description	SRS 2003 Bohunice Sealed Radioactive Sources Facility

Processing part of the "BSRSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2001

Storage part of the "BSRSF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity	Sufficient capacity untill a new Integral Storage will be built at the territory of NPP A-1				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
MPV-256	tile hole	2000	No	No	No	Yes

Facility: NPP V-1

Description	Nuclear Power Plant V-1 Waste Storage - was planned for 30 years operation

Processing part of the "NPP V-1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1978

Storage part of the "NPP V-1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	Nuclear Power Plant V-1 Waste Storage - was planned for 30 years operation				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILWS-1	shaft	1978	No	No	No	No
LILWS-2	tank (stainless steel)	1978	No	No	No	No

Facility: NPP V-2

Description	Nuclear Power Plants V-2 Waste Storage

Processing part of the "NPP V-2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1984

Storage part of the "NPP V-2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity	Nuclear Power Plants V-2 Waste Storage - was planned for 35 years operation				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILWS-1	shaft	1984	No	No	No	No
LILWS-2	tank (stainless steel)	1984	No	No	No	No

Facility: NPP A-1

Description	NPP A-1 Waste Storage

Storage part of the "NPP A-1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILWStor.	pool	1972	No	Yes	No	No
LILWStor.	tank (concrete)	1972	No	No	No	No
LILWStor.	tank (stainless steel)	1972	No	No	No	No
LILWStor.	trench (lined)	1972	No	Yes	No	No
LILWStor.	building	1972	No	No	No	No
LILWStor.	building	1972	No	No	No	No

Reporting Group 01 RG, Site Data: NPP EBO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: NPP Jaslovske Bohunice

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage NPP A-1 Liquid	No	523	0	0	0	0	0	100	0	No
LILW-SL	Storage NPP A-1 Solid	No	4836	0	0	0	0	0	100	0	No
LILW-SL	Storage NPP V-1 Liquid	No	2737	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP V-1 Solid	No	1061	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP V-2 Liquid	No	2817	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP V-2 Solid	No	852	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP A-1 Solid	Yes	110	0	0	0	0	0	100	0	No
LILW-SL	Storage NPP V-1 Solid	Yes	323	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP V-2 Solid	Yes	23	100	0	0	0	0	0	0	No
LILW-LL	Storage NPP A-1 Liquid	No	523	0	0	0	0	0	100	0	No
LILW-LL	Storage NPP A-1 Solid	No	799	0	0	0	0	0	100	0	No
LILW-LL	Storage NPP A-1 Liquid	Yes	36	0	0	0	0	0	100	0	No
LILW-LL	Storage NPP A-1 Solid	Yes	245	0	0	0	0	0	100	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Chemical Precipitation				Yes
Compaction			decrease	
Decontamination			same	
Evaporation			same	
Filtration			same	
Incineration			increase	
Ion Exchange			same	
Metal Melting	Yes			
Rinsing			same	
Size Reduction			increase	
Super Compaction			increase	
Wastewater Treatment			same	

Reporting Group 01 RG, Site Data: NPP EBO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Bituminization			same	
Cementation			increase	
Macroencapsulation			same	
Solidification		Yes		
Stabilization		Yes		
Vitrification			same	

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-90	1 3.90E-01			No	Yes	0	3.90E-01	2005.05
Cs-137	1 2.20E-04			No	Yes	0	2.20E-04	2005.02
Cs-137	2 1.24E+00			No	Yes	0	1.24E+00	1987.02
Sr-90	2 9.88E-04			No	Yes	0	9.88E-04	2003.09
Cs-137	5 1.03E+01			No	Yes	0	1.03E+01	2003.09
Co-60	8 1.04E+00			No	Yes	0	1.04E+00	2003.09
Co-60		1 7.86E+03		No	Yes	0	7.86E+03	2001.10

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241		2 1.48E+01	No	Yes	0	1.48E+01	1987.03
Am-241	1 1.18E-02		No	Yes	0	1.18E-02	1972.03
Am-241	329 1.62E-02		No	Yes	0	1.62E-02	2005.09
Am-241	1188 1.43E+00		No	Yes	0	1.43E+00	2002.04
Ra-226	7 2.38E-02		No	Yes	0	2.38E-02	1979.07

Reporting Group 01 RG, Site Structure: NPP EMO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: NPP Mochovce

Location: Mochovce

License Holder(s) : Slovenske Elektrarne, a. s.
Hranicna 12
827 36 Bratislava 212

The following list the waste management facilities that are located at this site.

Facility: NPP EMO1,2

Description	Nuclear Power Plant EMO 1,2 Waste Storage

Storage part of the "NPP EMO1,2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILWStor.	tank (stainless steel)	1998	No	No	No	No
LILWStor.	shaft	1998	No	No	No	No

Reporting Group 01 RG, Site Data: NPP EMO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: NPP Mochovce

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage NPP EMO1,2 Liquid	No	1734	100	0	0	0	0	0	0	No
LILW-SL	Storage NPP EMO1,2 Solid	No	610.4	100	0	0	0	0	0	0	No

Comment #5289: The additional characteristic of the waste

Unprocessed: solid (non-dispersible), solid (dispersible), liquid (aqueous), liquid (organic), sludge, resin

Reporting Group 01 RG, Site Structure: RU RAO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: Near Surface Disposal Facility

Location: Mochovce

License Holder(s) : Slovenske Elektrarne, a.s.
Hranicna 12
827 36 Bratislava 212

The following list the waste management facilities that are located at this site.

Facility: RU RAO

Description	Republikove Ulozisko Radioaktivnych Odpadov

Disposal part of the "RU RAO" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	Yes
List SRS	No				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	11160	Capacity -planned (m3)	22320
Depth (m)	-2 to +3.5		
Host medium	crystalline rock (basalt)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1971	1975
site selection		1975	1978
design		1981	1997
construction		1986	1999
commissioning		1999	2001
operation		2001	
Additional Activities and Events			
EVENT: operating license granted		2001	

Reporting Group 01 RG, Site Data: RU RAO

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: Near Surface Disposal Facility

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal RU RAO	Yes	3199	87	0	0	0	0	13	0	No

Reporting Group 03 RG, Site Structure: VÚJE

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name:	Výskumný ústav jadrových elektrární,Plc.-engineering, project and research organisation
Location:	Jaslovské Bohunice
License Holder(s) :	VUJE, a. s. Okružná 5 918 64 Trnava Slovak Republik

The following list the waste management facilities that are located at this site.

Facility: EBL

Description	Experimental Bituminization Facility

Processing part of the "EBL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1984

Facility: ESL

Description	Experimental Incineration Facility

Processing part of the "ESL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1986

Reporting Group 03 RG, Site Data: VÚJE

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Full Name: Výskumný ústav jadrových elektrární,Plc.-engineering, project and research organisation

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Incineration		Yes	suspended	
Shredding and Compaction		Yes	suspended	
Size Reduction		Yes	suspended	

Processing - Conditioning method(s)

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

REGULATORS

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Name	NRA SR
Full Name	Nuclear Regulatory Authority of the Slovak Republic/ Urad jadroveho dozoru SR
Division	Low and Internediate Level Waste Management
City or Town	Bratislava, division in Trnava

Name	MZ SR
Full Name	Public Health Authority of the Slovak Republic under Ministry of Health of the Slovak Republic/Urad verejneho zdravotnictva SR
Division	Division of Radiological Protection
City or Town	Bratislava

REGULATIONS / LAWS

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Name	541/2004	
Title or Name	Law No. 541/2004 Coll. on the peaceful use of nuclear energy	
Reference Number	Law No. 541/2004 Coll.	
Date Promulgated or Proclaimed	2004-09-09	Law

Name	527/2005	
Title or Name	Act No. 527/2005 Coll. on the Public Health Protection	
Reference Number	on the Public Health Protection	
Date Promulgated or Proclaimed	2005-12-15	Law

Attachment #1180: This act is available only in Slovak Language.

File name: Law No. 578-2003 Coll. on alternation and amendments to Law No. 272-1994 Coll. on the Protection of Human Health.pdf

File type: PDF Document

Member State's Reference # Act No. 578/2003 Coll.

Name	12/2001	
Title or Name	Regulation of Ministry of Health No. 12/2001 Coll on Requirements for Radiation Safety Assurance	
Reference Number	R No. 12/2001	
Date Promulgated or Proclaimed	2001-01-24	Regulation

Attachment #1179: This Regulation exists only in Slovak version.

File name: Regulation No. 12-2001 Coll. on Requirements for Radiation Safety Assurance.pdf

File type: PDF Document

Member State's Reference # Reg. No. 12/2001 Coll.

MILESTONES

Country: Slovakia (Slovak Republic) Reporting Year: 2005

Start Year or Reference Year:	1986	End Year	2005
Description of Milestone			
The Experimental Bituminisation Facility was in operation since 1986 and Decisions of the Nuclear Regulatory Authority of the Slovak Republic that approved its operation were extended every three years. The last Decision, which approved its operation, was No. 93/2001. Since 31.12.2004 this facility is out of operation. A new decision on decommissioning of this facility is under preparation.			

Start Year or Reference Year:	1987	End Year	2005
Description of Milestone			
The Experimental Incinerator with additional cementation facility was used only for experimental purposes since 1987 and Decisions of the Nuclear Regulatory Authority of the Slovak Republic which approved its operation were extended every three years. The last Decision which approved its operation was No. 34/2003. Since 31.12.2004 this facility is out of operation. A new decision on decommisioning of this facility is under preparation.			

Start Year or Reference Year:	1995	End Year	2005
Description of Milestone			
The Bituminisation Facility PS 44 has been in operation since 1995. Its operation was approved by the Decision of the Nuclear Regulatory Authority of the Slovak Republic No. 122/1995.			

Start Year or Reference Year:	1999	End Year	2005
Description of Milestone			
The National Near Surface Repository in Mochovce is determined for disposal of low and intermediate level short-lived radwaste in special fibre reinforced concrete (FRC) containers as additional engineering barrier of repository. The repository construction was finished in November 1992. Modifications of facility as well as additional documentation recommended by IAEA experts mission were finished in 1998 - 1999. Its commissioning was approved by the Decision of the Nuclear Regulatory Authority of the Slovak Republic No. 335/1999. Then after assessment of repository commissioning report, in September 2001, UJD issued permission for operation of its first double row.			

Start Year or Reference Year:	1999	End Year	2005
Description of Milestone			
The Bohunice Treatment and Conditioning Complex was commissioned in 1999. Its commissioning was approved by Decisions of Nuclear Regulatory Authority of the Slovak Republic No. 416/1999 and No. 111/2000. Operational authorisation for Bohunice Treatment and Conditioning Complex was issued by UJD at the beginning of 2001 by Decision No.5/2001.			

Start Year or Reference Year:	2000	End Year	2005
Description of Milestone			
The Bituminisation Facility PS 100 was commisssioned in 2000. Its commissioning was approved by the Decision of the Nuclear Regulatory Authority of the Slovak Republic No. 124/2000. Its operation was approved by Decision of the Nuclear Regulatory Authority of the Slovak republic No. 11/2002.			

Start Year or Reference Year:	2003	End Year	2005
Description of Milestone			
At the end of 2003 was issued UJD Permission No. 236/2003 for design and construction of a new Final Centre for Conditioning and Treatment of Liquid Radioactive Waste in Mochovce. Operation is expected at the end of 2006.			

Start Year or Reference Year:	2004	End Year	2005
Description of Milestone			
UJD permission for siting for an Integral Storage was issued at the end of 2004.This Integral Storage is dedicated for safe storage of processed radioactive waste from decommissioning of NPP A-1, NPP V-1, NPP V-2 in Jaslovské Bohunice, for captured contaminated materials within the territory of the Slovak Republic and for radwaste which do not comply with waste acceptance criteria for Mochovce National Near Surface Repository.			

Policies

Country: Slovakia (Slovak Republic) Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Partially
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility		
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

Country: Slovakia (Slovak Republic) **Disposal Facilities** Reporting Year: 2005

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	No
110	Currently, are any of your country's wastes (processed or unprocessed, including the products of reprocessing) or spent fuel being stored in another country?	No
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	Yes
75	If the answer was yes, are any registries used only for disused/spent SRS?	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	No

	Procedures	(Yes;No)
78	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)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for
Slovenia
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:26:14

Waste Class Matrix(ces) Used/Defined

Country: Slovenia, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: National

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
LILW	95	5	0
HLW	0	0	100

Description: Slovenia uses the same naming as the Agency's scheme but limits for nuclides on classes are different (see Table I, page 28 in the 1st Slovenian National Report to the Joint Convention). The above % are estimates that will be refined in a future submission.

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

This country uses the NEWMDB’s definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Slovenia, Republic of Reporting Year: 2005

Reporting Group: **ARAO**

Inventory Reporting Date: December 2005

Waste Matrix Used: National

Description: ARAO- Agency for Radwaste Management is a non-profit organisation of the Slovene Government which provides a state-owned public service for radioactive waste management. The main objective of the ARAO is to provide efficient, safe and responsible management for all types of nuclear waste.

Site Name	Facility Name	Facilities Defined		
BRINJE R	SF STORAGE		storage	
BRINJE S	CISF		storage	
KRSKO NPP	KRSKO NPP	processing	storage	
LILW Rep.	LILW Rep.			disposal

Attachment #1184: ARAO Annual report 2002

File name: ARAO_annual_ report_2002.pdf

File type: PDF Document

Member State's Reference # ARAO Annual report 2002

Attachment #1188: ARAO Annual report 2003

File name: ARAO_AnnualReport_2003.pdf

File type: PDF Document

Member State's Reference # ARAO Annual report 2003

Attachment #1219: ARAO Annual report 2005

File name: ARAO_annual_ report_2005.pdf

File type: PDF Document

Reporting Group ARAO, Site Structure: BRINJE R

Country: Slovenia, Republic of Reporting Year: 2005

Full Name: Institut Josef Stefan Research Reactor Centre, TRIGA Mark II research reactor

License Holder(s) : Institut Josef Stefan Research Reactor Centre
Jamova 39, SI-1000, Ljubljana, Slovenia
tel: +386 1 477-3900 (operator)
fax: +386 1 2519-385
http://www.ijs.si/

The following list the waste management facilities that are located at this site.

Facility: SF STORAGE

Description	There are two spent fuel storage pools which are an integral part of TRIGA Mark II research reactor.

Storage part of the "SF STORAGE" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	HLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	The capacity of the new pool is 195 spent fuel elements.				

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Pool-Old	pool	1966	Yes	No	No	No
Pool-New	pool	1992	No	No	No	No

Comment #12165: Storage Facility SF STORAGE

IJS Reactor Infrastructure Centre

There are two interim storage pools which are part of the IJS Reactor Infrastructure Centre. The old storage pool is not in use. The new storage pool is maintained operational and prepared for immediate use if necessary. Both pools have been empty since 1999, when all spent fuel elements (total 219) were shipped to the USA for final disposal.

Reporting Group ARAO, Site Structure: BRINJE S

Country: Slovenia, Republic of Reporting Year: 2005

Full Name: Central Storage Facility for Radioactive Waste in Brinje (CISF)

License Holder(s) : ARAO - Agency for Radwaste Management, Parmova 53, SI-1000 Ljubljana, Slovenia

The following list the waste management facilities that are located at this site.

Facility: CISF

Description	Central Storage Facility for Radioactive Waste in Brinje. A storage for low and intermediate level waste from small producers (medicine, industry and research).

Storage part of the "CISF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	HLW	No	No
SRS	Yes	No			
List SRS?	Yes				
Capacity	~500 m3.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CISF-LILW	building	1986	No	No	No	Yes

Comment #12166: Storage Facility CISF

The storage is a near-surface concrete building with the roof covered with a soil layer. The building is subdivided by concrete walls into nine storage sections and an entrance area. The ground plan of the facility is 10.6 m x 25.7 m with a height of 3.6 m. The useful capacity of the storage is about 500 m3, and the remaining small area is intended for workers, for loading and unloading the waste and for internal transport. The storage section at the back end of the building is deeper relative to the level of the other sections, and is intended for storage of more active spent sources. The facility is equipped with a ventilation system for reducing radon concentration and air contamination in the storage facility. The water and sewage collecting system is designed as a closed system to retain all liquids from the storage facility in the sump. Liquids are discharged after the measurements of the radioactive contamination which has to be below the limitation in the regulation. The electricity supply system is used for illumination of the storage facility, for heating of auxiliary rooms and for the powering of ventilation. The storage facility is also protected by an alarm system which is connected to a 24-hour security service.

Reporting Group ARAO, Site Structure: KRSKO NPP

Country: Slovenia, Republic of Reporting Year: 2005

Full Name: Krsko Nuclear Power Plant

License Holder(s) : Krsko Nuclear Power Plant
Vrbina 12, SI-8270 Krsko, Slovenia
tel: +386 7 480 20 00
http://www.nek.si

The following list the waste management facilities that are located at this site.

Facility: KRSKO NPP

Description	Krsko NPP processing and storage facility

Processing part of the "KRSKO NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1983

Storage part of the "KRSKO NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	Yes	Yes	HLW	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	Solid radwaste storage facility (LILW) with capacity of app.2500-2800m3 and the decontamination building. Total storage capacity of the spent fuel pool is 1694 fuel positions.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LILW-store	building	1983	No	No	No	No
SF-pool	pool	1983	No	No	No	No

Comment #12160: Spent Fuel Management Facilitiy in Krsko NPP

Spent Fuel Management Facilitiy

The Republic of Slovenia has no off-site spent fuel management facilities. The spent fuel that is generated by the operation of the Krsko NPP is managed in storage facility which are integral parts of these nuclear facility.

The Fuel Handling Building is operated under the plant’s license and is therefore not considered an independent nuclear facility. The fuel handling building consists of a spent fuel pool and the related fuel handling system which enables the handling of spent fuel.

Comment #12161: LILW Facilities in Krsko NPP

The Krsko NPP includes the following buildings for radioactive waste management:
Auxiliary Building, where the systems for solid, liquid and gaseous waste processing are located. The building is located adjacent to the Fuel Handling Building and the Reactor Building within the Radiologically Controlled Area. The main activities related to waste management in this building are pre-treatment (waste collection, segregation, chemical adjustment, decontamination), treatment (radionuclide removal, volume reduction) and conditioning (immobilisation, packaging). The conditioned waste is transported to the Solid Radwaste Storage Facility by a forklift or an electric-powered cart using a special shield when necessary.
Solid Radwaste Storage Facility, an interim storage. Its operating license was extended in 1988 due to the lack of a LILW repository. It is a reinforced concrete structure, seismically qualified, located adjacent to the Auxiliary Building. Total area is 1470 m2 after an area optimisation project, applying a special steel structure to support the storage of waste on the second level, the useful volume was increased to allow waste storage for a longer period of time. The storage time in the Solid Radwaste Storage Facility is variable and is dependent on waste generation rates and waste management plans. The facility has provisions for storing different solid radioactive wastes separately and retrieving them for further processing (supercompaction, incineration, melting, clearance after decay of radionuclide) or disposal at a later time.
Decontamination Building, an interim storage, built for decay storage for two old steam generators and radioactive waste produced through replacement of steam generators and other larger components. The building meets the requirements for LILW storage. The outer wall and the roof slab design were governed by the radiological shielding requirements.

Reporting Group ARAO, Site Structure: LILW Rep.

Country: Slovenia, Republic of Reporting Year: 2005

Full Name: Planned repository for LILW

License Holder(s) : future facility, not licensed

Comment #7599: The location of disposal of LILW

The final location of disposal of LILW has not been selected yet. According to the plans, the repository siting should be concluded by 2008 and repository constructed by 2013.

The following list the waste management facilities that are located at this site.

Facility: LILW Rep.

Description	planned LILW near-surface repository

Disposal part of the "LILW Rep." facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW	No	Yes	HLW	No	No
Disused/spent, sealed radioactive sources (SRS).				No	Yes
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	20000
Depth (m)			
Host medium	unknown (site not selected)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1995	2004
site selection		2003	2007
design		2005	2008
construction		2009	2010
commissioning		2010	2011
operation		2011	2038
closure		2038	
institutional control			2338

REGULATORS

Country: Slovenia, Republic of Reporting Year: 2005

Name	SNSA
Full Name	Slovenian Nuclear Safety Administration
Division	Division of Nuclear and Radioactive Materials Divison of Inspection Control
City or Town	Ljubljana

Comment #7597: SNSA

Slovenian Nuclear Safety Administration
Zelezna cesta 16
P.O. Box 5759
SI - 1001 Ljubljana
Slovenia
Phone: +386 1 472 11 00
Fax: +386 1 472 11 99
E-mail: SNSA@gov.si
Web site: http://www.ursjv.gov.si/

Attachment #1187: SNSA Annual Report 2003

File name: SNSA_AnnualReport_2003.pdf

File type: PDF Document

Attachment #1217: SNSA Annual Report 2004

File name: SNSA_AnnualReport_2004.pdf

File type: PDF Document

Attachment #1218: SNSA Annual Report 2005

File name: SNSA AnnualReport 2005.pdf

File type: PDF Document

Name	SRPA
Full Name	Slovenian Radiation Protection Administration
Division	Area of radiation practices and use of radiation sources in health and veterinary care
City or Town	Ljubljana

Comment #9720: Regulator SRPA

Slovenian Radiation Protection Administration
Trzaska cesta 21
SI-1000 Ljubljana
Slovenia
Phone: +386 1 478 87 09
Fax: +386 1 478 87 15

The 2002 Act gives the competence in the area of radiation practices and use of radioactive sources in heath and veterinary care to the Slovenian Radiation Protection Administration (SRPA), which was established in March 2003 within the Ministry of Health.

The SRPA performs technical, administrative, inspection and development tasks in the area of radiation practices and use of radiation sources in health and veterinary care; health protection of people against detrimental effect of ionising radiation; systematic inspection of working and living premises due to exposure of people to the natural radiation sources; implementation of monitoring of radioactive contamination of foodstuffs and drinking water; reduction, restriction and prevention of health detrimental effects of non-ionising radiation and assessment of compliance and authorization of radiation protection experts. In the scope of radiation protection the SRPA issues the approvals to evaluation of the protection of the exposed workers of the radiation and extend the radiation risks for exposed workers at given work places.

REGULATIONS / LAWS

Country: Slovenia, Republic of Reporting Year: 2005

Name	ZVISJV	
Title or Name	ACT ON IONISING RADIATION PROTECTION AND NUCLEAR SAFETY with amendments	
Reference Number	Off. Gaz. RS, 67/2002	
Date Promulgated or Proclaimed	2002-10-01	Law

Comment #7595: ZVISJV with amendments

In July 2002 the Parliament of the Republic of Slovenia adopted a new Act on Ionising Radiation Protection and Nuclear Safety (Off. Gaz. RS, 67/2002 - hereinafter referred to as “2002 Act”).

As defined in the first Article of this act, its main purpose is “to regulate ionising radiation protection, with the aim of reducing the detrimental effects on health and reducing to the lowest possible level radioactive contamination of the environment due to ionising radiation resulting from the use of radiation sources, while at the same time enabling the development, production and use of radiation sources and performing radiation practices”. It also regulates radioactive waste and spent fuel management.

An Act amending the 2002 Act was adopted on 25 February 2003. It provides that the Slovenian Government shall prepare an amended National Program for the Protection of the Environment as regards radioactive waste and spent fuel management by the end of 2004 and submit it to the Parliament for adoption. The site for a low- and intermediate-level waste repository must be approved by 2008 and licensed for operation by 2013.

New amendments of the 2002 Act were adopted on 29 April 2004. The amendments were introduced to reflect the fact that from 1 May 2004 Slovenia is a Member State of the European Union. The aim of this last revision was mainly to harmonise the provisions of the act with the European Union’s legal requirements, especially in the area of shipment of radioactive waste and sources.

The 2002 Act also provides that the regulations which have been issued on the basis of the previous 1984 and 1980 Acts shall apply until new regulations, which are to be adopted pursuant to provisions of the 2002 Act, are issued.

Based on the 2002 Act, twelve decrees and regulations have been issued (Appendix II). All other decrees and regulations are expected to be adopted and issued in 2004 and early 2005.

Attachment #1181: ACT ON IONISING RADIATION PROTECTION AND NUCLEAR SAFETY Unofficial translation of the original in Slovene language published in Official Gazette of Republic of Slovenia, no. 67/2002

File name: ACT_ON_IONISING_RADIATION_PROTECTION_AND_NUCLEAR_SAFETY.pdf

File type: PDF Document

Member State's Reference # Off. Gaz. RS, 67/2002

REGULATIONS / LAWS

Country: Slovenia, Republic of | Reporting Year: 2005

Name	Z-3	
Title or Name	Regulation Z-3 "On mode of collecting, accounting, processing, storing, final disposal and release of radioactive waste into the environment", Derogation of Articles 31.,32. in 33. -> UV1: Decree on practices involving radiation	
Reference Number	Official Gazette SFRY, 40/86	
Date Promulgated or Proclaimed	1986-07-18	Regulation

Comment #7596: Regulation Z-3

Regulation Z-3 contains the following (detailed) provisions:
- on categorising of radioactive wastes,
- on collecting of radioactive wastes,
- on accounting of radioactive wastes,
- on processing of radioactive wastes,
- on storing and final disposal of radioactive wastes,
- on release of radioactive wastes,
- on labelling of radioactive wastes.

On the day the Decree on Radiation Practices UV1 (Off. Gaz. RS, 48/2004) enters into force the Articles of Z-3 Regulation 31, 32, 33 ceases to apply.

Attachment #1182: Regulation Z-3 "On mode of collecting, accounting, processing, storing, final disposal and release of radioactive waste into the environment"

File name: Regulatory Z-3.pdf

File type: PDF Document

Member State's Reference # Off. Gaz., SFRY, No. 40/86

Name	E-1	
Title or Name	Regulation E-1 'On siting, construction, commissioning, start-up and exploitation of nuclear facilities' (with appendix on QA)	
Reference Number	Off. Gaz., SFRY, No. 52/88	
Date Promulgated or Proclaimed	1988-08-26	Regulation

Name	UV3	
Title or Name	Decree on the Areas of Limited Use of Land Due to Nuclear Facility and on Conditions for Construction in such Areas - UV3	
Reference Number	Off. Gaz: RS, 36/2004	
Date Promulgated or Proclaimed	2004-04-28	Regulation

Name	UV8	
Title or Name	Decree on the Criteria for Determining the Amount of Compensation Due to the Limited Use of Land in the Area of Nuclear Facility - UV8	
Reference Number	Off. Gaz. RS, 134/2003	
Date Promulgated or Proclaimed	2003-12-31	Regulation

REGULATIONS / LAWS

Country: Slovenia, Republic of Reporting Year: 2005

Name	ARAO est.	
Title or Name	Decree on Establishment of a Public Agency for Radwaste Management	
Reference Number	Off. Gaz. RS, 5/91, 45/96, 32/99, 38/2001)	
Date Promulgated or Proclaimed	1991-02-09	Regulation

Name	Public S.	
Title or Name	Decree on Mode and Conditions of Discharging the Public Service on Radioactive Waste Management	
Reference Number	Off. Gaz. RS, 32/99, 41/04	
Date Promulgated or Proclaimed	1999-05-21	Regulation

Name	JV11	
Title or Name	Regulation on inputs from and outputs in the EU member states and on import and export of radioactive waste	
Reference Number	Official Gazette RS, 60/2004	
Date Promulgated or Proclaimed	2004-06-03	Regulation

Name	FV1	
Title or Name	Regulation on physical protection of nuclear materials, nuclear facilities and radiation facilities	
Reference Number	Official Gazette RS, 31/2005	
Date Promulgated or Proclaimed	2005-03-25	Regulation

Name	ZSFR-UPB1	
Title or Name	Act on Fund for Financing Decommissioning of the Krško Nuclear Power Plant and Disposal of Radioactive Waste from the Krško NPP	
Reference Number	Official Gazette RS, No. 47/2003	
Date Promulgated or Proclaimed	2003-05-22	Law

REGULATIONS / LAWS

Country: Slovenia, Republic of Reporting Year: 2005

Name	BHRNEK	
Title or Name	Act Ratifying the Treaty between the Government of the Rep.of Slovenia and the government of the Rep.of Croatia on the regulation of the status and other legal relations regarding investment, exploitation and decommissioning of the Krsko NPP and Joint Declaration at the time of signature of the Treaty between the Gov. of the Rep. of Slovenia and the gov. of the Rep. of Croatia on the regulation of the status and other legal relations regarding invest., exploit. and decom. of the Krsko NPP	
Reference Number	Official Gazette RS-MP, No. 23/2003	
Date Promulgated or Proclaimed	2003-03-06	Law

Name	UV2	
Title or Name	Decree on dose limits, radioactive contamination and intervention levels	
Reference Number	Official Gazette RS, 49/2004	
Date Promulgated or Proclaimed	2004-04-30	Regulation

MILESTONES

Country: Slovenia, Republic of | Reporting Year: 2005

Start Year or Reference Year:	1966	End Year	
Description of Milestone			
The Research Reactor TRIGA Mark II is operated by Josef Stefan Institute. It was put into operation in May 1966. The reactor was delivered by General Atomics, the reactor tank and body were built by Slovenian companies. Main purpose of the research reactor is research, training and isotopes production.			

Start Year or Reference Year:	1974	End Year	
Description of Milestone			
The Krsko NPP construction was started. It is a Westinghouse two-loop pressurised water reactor. It initial power was 632 MWe.			

Start Year or Reference Year:	1983	End Year	
Description of Milestone			
The Krsko NPP began with commercial operation in January 1983.			

Start Year or Reference Year:	1984	End Year	
Description of Milestone			
In year 1984 entered into force one of the most important act "Act on Radiation Protection and the Safe Use of Nuclear Energy" (Off. Gaz. SFRY, No. 62/84).			

Start Year or Reference Year:	1986	End Year	
Description of Milestone			
The Central Storage Facility for Radioactive Waste in Brinje was put into operation in 1986. It is intended for storage of low and intermediate level radioactive waste arising from medical, industrial and research applications. The storage facility is situated at the Research Reactor Centre, about 15 km north-east of Ljubljana.			

Start Year or Reference Year:	1987	End Year	
Description of Milestone			
The Slovenian Nuclear Safety Administration (SNSA) was established in 1987. SNSA is competent in the area of nuclear safety and radioactive waste management. Previously, the functions of the regulatory body were held by the Committee of Energy and Industry.			

Start Year or Reference Year:	1991	End Year	
Description of Milestone			
The Agency for Radwaste Management is founded by the Government of Slovenia as a public eneterprise, responsible for final disposal of radioactive waste.			

Start Year or Reference Year:	1994	End Year	
Description of Milestone			
The Act on the Fund for financing Decommissioning of the Krsko NPP and disposal of Radioactive Waste from the Krsko NPP was adopted in the end of year 1994. By this act was established The Financial Fund for Decommissioning of Nuclear Power Plant Krsko.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
In July 2002 the Parliament of the Republic of Slovenia adopted a new Act on Ionising Radiation Protection and Nuclear Safety. The Act entered into force on 1 October 2002. Its main purpose is “to regulate ionising radiation protection, with the aim of reducing the detrimental effects on health and reducing to the lowest possible level radioactive contamination of the environment due to ionising radiation resulting from the use of radiation sources, while at the same time enabling the development, production and use of radiation sources and performing radiation practices”. It also regulates radioactive waste and spent fuel management.			

MILESTONES

Country: Slovenia, Republic of Reporting Year: 2005

Start Year or Reference Year:	2003	End Year	
Description of Milestone			
On 7 March 2003 the Agreement between the Governments of the Republic of Slovenia and the Republic of Croatia on the status and other legal issues related to investments, exploitation and decommissioning of the Nuclear Power Plant Krško entered into force (it was signed on 19 December 2001).			

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
In accordance with the provisions of the Treaty between the Government of the Republic of Slovenia and Republic of Croatia on regulation of status and other legal relationships relating to investments into the Krsko nuclear power plant, the Slovenian and Croatian government adopted the first revision of the Program of NPP Krsko decommissioning, SF and LILW disposal.			

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
On the basis of the Detailed Plan of National Importance for the LILW Repository, ARAO Agency at the end of the year 2004 invited all Slovenian local communities to cooperate in environmental setting of the LILW repository.			

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
In November 2004 the Ministry of the Environment and Spatial Planning officially started the spatial planning procedure as part of site selection process, aiming at developing the National detailed site development plan for LILW.			

Start Year or Reference Year:	2005	End Year	
Description of Milestone			
In November 2005 three sites (locations) in voluntaries local communities were confirmed by the Government.			

National Systems

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

Comment #7612: HLW and SNF Management Strategy

In 1996 the Slovenian Government accepts the High Level Waste and Spent Fuel Management Strategy prepared by ARAO.

The preparation of a long-term spent fuel management program for the Krško NPP's fuel was strongly influenced by the specific situation in Slovenia:
- a small nuclear program (only one NPP).
- the planned phasing out of nuclear energy after 2023 (at the end of the scheduled lifetime of the Krško NPP).
- the unresolved question of co-ownership with neighbouring Croatia (this is still the subject of negotiations between the two Governments): sharing the spent fuel and other radioactive waste is an open possibility.

In the strategy of long-term spent fuel management a deferred final decision is recommended as the only reasonable solution in the present situation. A deferred decision does not only delay the final solution but also gives negotiators sufficient time to reach an agreement between the co-owners without additional pressures. It also gives the possibility to reconsider different options including the possibility of the reprocessing of spent fuel, as well as new technological developments. This provides the opportunity of responding to and joining the project of a regional repository, if this idea, which seems so attractive to countries with small nuclear programs, is realised.

In this strategy the short-term solutions for spent fuel storing are also included. In the first stage an increase of the existing capacity of the spent fuel pool at Krško NPP is proposed. If such an increase in pool capacity will not be sufficient, interim dry storage in casks on-site is proposed as an additional option.

Reference: http://www.sigov.si/cgi-bin/spl/ursjv/porocila/ang/National_Reports.html

Comment #7613: The Decom. Fund and Decom. Plan for Krsko NPP

The Fund for Financing the Decommissioning of the Krsko NPP and for the disposal of its radioactive waste was established by the Act on the Fund for Financing Decommissioning of the Krsko NPP and Disposal of Radioactive Waste from Krsko NPP (Off.Gaz. RS, No.75/94, 35/96). The Fund would be collect finances from the contributions of each produced kWh at the plant. However, due to the unresolved legal and ownership status of Krsko NPP, required funds are only partially collected.

The Decommissioning Plan for Krsko NPP was adopted by the Government in September 1996. Three decommissioning strategies for the Krško NPP are analyzed:
- immediate dismantling,
- later dismantling and
- entombment.

For the purpose of cost assessment for the decommissioning of NPP Krsko and the estimation of the contribution to the decommissioning fund, the above options were evaluated from radiological, safety, financial and political aspects. The results have shown that the option, with immediate dismantling is most appropriate.

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

Policies

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)
	Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.	
	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	

Policies

Country: Slovenia, Republic of — **National Systems** — Reporting Year: 2005

30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

Comment #7614: Preliminary waste AC for future LILW

Slovenia has preliminary waste acceptance criteria for future LILW repository (generic location).

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	No
61	waste minimization	No
62	waste storage	No
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Comment #7615: Comments

Operators have written their oun procedures.

Processing and storing - nuclear fuel cycle waste separately from non-nuclear fuel cycle waste.
Disposing - according to the waste type (LILW, SF, LILW LL etc.) and not according to the waste orgin (from nuclear fuel cycle or non-nuclear fuel cycle).

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

69	In your Country are there any mobile waste processing facilities?	No

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
110	Currently, are any of your country's wastes (processed or unprocessed, including the products of reprocessing) or spent fuel being stored in another country?	No
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	No
88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
89	Has your Country implemented dedicated disposal facilities for spent SRS?	No

Policies

Country: Slovenia, Republic of **Spent SRS** Reporting Year: 2005

90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

Comment #7639: Comment

There are certain requirements by other mechanisms.

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

Comment #7640: There are limitations by other mechanisms.

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for

Spain

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:27:21

Waste Class Matrix(ces) Used/Defined

Country: Spain, Kingdom of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #132: use of the IAEA Def matrix

The CSN (see Regulators) is the only body in Spain responsible for radiation protection and nuclear safety, regardless of the type of radioactive material or waste. Thus, the CSN has competence over all type of waste (Matrix IAEA Def.-
LILW-SL, LILW-LL, HLW).

The Ministry of Industry, Tourism and Trade is responsible for defining the policy and for establishing the regulations on radioactive waste, so it has competence over all type of waste (Matrix IAEA Def.- LILW-SL, LILW-LL, HLW).

Comment #349: explanation of classes used

Although no explicit definition exists for LILW-SL in regulations currently in force, limits are defined according to the safety objectives set by safety authorities for El Cabril near surface disposal facility.

Other waste exceding these limits are considered HLW.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Spain, Kingdom of Reporting Year: 2005

Reporting Group: **CCNN**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: NUCLEAR POWER PLANTS (CENTRALES NUCLEARES)

Site Name	Facility Name	Facilities Defined		
ALMARAZ	RBMA	processing	storage	
ASCO	RBMA	processing	storage	
COFRENTES	RBMA	processing	storage	
GAROÑA	RBMA	processing	storage	
TRILLO	RBMA	processing	storage	
VANDELLOS	RBMA	processing	storage	
ZORITA	RBMA	processing	storage	

Reporting Group: **CIEMAT**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS (NATIONAL RESEARCH CENTRE FOR ENERGY AND ENVIRONMENT RELATED TECHNOLOGIES)

Site Name	Facility Name	Facilities Defined		
CIEMAT	RMBA	processing	storage	

Reporting Group: **ENRESA**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: National Waste Management Company

Site Name	Facility Name	Facilities Defined		
EL CABRIL	BLOQ	processing		
	COMP	processing		
	INC	processing		
	CELDA VLLW	processing		disposal
	COND BLG		storage	
	ERT		storage	
	IR ZONE		storage	
	MODULOS		storage	
	LILW CELDA			disposal
VANDELLOS	RMBA		storage	

Groups Overview

Country: Spain, Kingdom of

Reporting Year: 2005

Reporting Group: **ENUSA**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: EMPRESA NACIONAL DEL URANIO S.A. (URANIUM NATIONAL COMPANY S.A.)

Site Name	Facility Name	Facilities Defined		
Juzbado	RMBA	processing	storage	

Reporting Group CCNN, Site Structure: ALMARAZ

Country: Spain, Kingdom of | Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE ALMARAZ (ALMARAZ NPP)

License Holder(s) : CENTRAL NUCLEAR DE ALMARAZ

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1981, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1983	No	No	No	No

Reporting Group CCNN, Site Data: ALMARAZ

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE ALMARAZ (ALMARAZ NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	1576	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: ASCO

Country: Spain, Kingdom of — Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE ASCO (ASCO I-II NPP)

License Holder(s) : asociacion vandellos-asco

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1983, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1983	No	No	No	No

Reporting Group CCNN, Site Data: ASCO

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE ASCO (ASCO I-II NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	610	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: COFRENTES

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE COFRENTES (COFRENTES NPP)

License Holder(s) : central nuclear cofrentes

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1984, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1984	No	No	No	No

Reporting Group CCNN, Site Data: COFRENTES

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE COFRENTES (COFRENTES NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	1598	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	
Thermal Treatment (non incineration)		Yes		

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: GAROÑA

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR SANTA MARIA DE GAROÑA (SANTA MARIA DE GAROÑA NPP)

License Holder(s) : NUCLENOR

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1971, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1971	No	No	No	No

Reporting Group CCNN, Site Data: GAROÑA

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR SANTA MARIA DE GAROÑA (SANTA MARIA DE GAROÑA NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	947	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: TRILLO

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE TRILLO (TRILLO NPP)

License Holder(s) : CENTRAL NUCLEAR DE TRILLO

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1988, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1988	No	No	No	No

Reporting Group CCNN, Site Data: TRILLO

Country: Spain, Kingdom of — Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE TRILLO (TRILLO NPP)

Inventory Reporting Date: December 2005 — Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	146	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: VANDELLOS

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE VANDELLOS 2 (VANDELLOS 2 NPP)

License Holder(s) : ASOCIACION NUCLEAR DE VANDELLOS-ASCO

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1988, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1988	No	No	No	No

Reporting Group CCNN, Site Data: VANDELLOS

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR DE VANDELLOS 2 (VANDELLOS 2 NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	301	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CCNN, Site Structure: ZORITA

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR JOSE CABRERA (JOSE CABRERA NPP)

License Holder(s) : UNION FENOSA

The following list the waste management facilities that are located at this site.

Facility: RBMA

Description	LILW

Processing part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1968, Estimate

Storage part of the "RBMA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1968	No	No	No	No

Reporting Group CCNN, Site Data: ZORITA

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR JOSE CABRERA (JOSE CABRERA NPP)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	719	100	0	0	0	0	0	0	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Carbon Adsorption			same	
Compaction			increase	
Decontamination			same	
Evaporation			same	
Filtration			same	
Ion Exchange			same	
Size Reduction			increase	

Processing - Conditioning method(s)

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

Reporting Group CIEMAT, Site Structure: CIEMAT

Country: Spain, Kingdom of — Reporting Year: 2005

Full Name: CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS (CIEMAT)

License Holder(s) : CIEMAT

The following list the waste management facilities that are located at this site.

Facility: RMBA

Description	LILW

Processing part of the "RMBA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970, Estimate

Storage part of the "RMBA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
SRS	Yes	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ALMACEN	building	1970	No	No	No	Yes
ALMACEN 2	building	2005	No	No	No	No
ALMACEN 3	building	2005	No	No	No	No

Reporting Group CIEMAT, Site Data: CIEMAT

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS (CIEMAT)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage RMBA	Yes	12	0	0	0	0	0	0	100	No

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Comment #9789: Waste Storage facilities/Class LILW-LL/Site RMBA

150 sealed sources (radioactive smoke detectors and lighting preventors)

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Reporting Group ENRESA, Site Structure: EL CABRIL

Country: Spain, Kingdom of Reporting Year: 2005

Full Name:	INSTALACION DE ALMACENAMIENTO DE RESIDUOS DE BAJA Y MEDIA ACTIVIDAD DE SIERRA ALBARRANA (EL CABRIL LILW DISPOSAL FACILITY)
License Holder(s) :	ENRESA

The following list the waste management facilities that are located at this site.

Facility: BLOQ

Description	FACILITY FOR PLACING THE WASTE PACKAGES IN CONCRETE CONTAINER AND GROUTING TO INMOBILIZE

Processing part of the "BLOQ" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1993

Facility: COMP

Description	SUPERCOMPACTOR

Processing part of the "COMP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1993

Facility: INC

Description	INCINERATOR

Processing part of the "INC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1993

Reporting Group ENRESA, Site Structure: EL CABRIL

Country: Spain, Kingdom of Reporting Year: 2005

Facility: CELDA VLLW

Description	VERY LOW LEVEL WASTE DISPOSAL AREA

Processing part of the "CELDA VLLW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2007

Disposal part of the "CELDA VLLW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	120000
Depth (m)	10		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
site selection		2002	
design		2003	2004
construction		2005	2007
commissioning		2003	2006
operation	Yes	2007	2038
closure	Yes	2039	2039
institutional control	Yes	2040	2100

Reporting Group ENRESA, Site Structure: EL CABRIL

Country: Spain, Kingdom of Reporting Year: 2005

Facility: COND BLG

Description	

Storage part of the "COND BLG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
BUFFER	building	1993	No	No	No	No

Facility: ERT

Description	

Storage part of the "ERT" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ERT	building	1993	No	No	No	No

Facility: IR ZONE

Description	

Storage part of the "IR ZONE" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	Yes	Yes			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
RECEPTION	building	1992	No	No	No	Yes

Reporting Group ENRESA, Site Structure: EL CABRIL

Country: Spain, Kingdom of Reporting Year: 2005

Facility: MODULOS

Description	

Storage part of the "MODULOS" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	This facility (three warehouses) is used to store legacy packages pending for caracterization for acceptance and transfer to the disposal centre.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
MODULOS	building	1982	No	No	No	Yes

Facility: LILW CELDA

Description	NEAR SURFACE DISPOSAL WITH ENGINEERED BARRIERS. WASTE PLACED IN REINFORCED CONCRETE CONTAINERS IN THE DISPOSAL CELLS

Disposal part of the "LILW CELDA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	100000	Capacity -planned (m3)	100000
Depth (m)	9		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1986	1987
site selection		1986	1987
design		1988	1989
construction		1989	1992
commissioning		1992	1992
operation		1993	
closure	Yes	2021	
institutional control	Yes	2321	

Reporting Group ENRESA, Site Data: EL CABRIL

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: INSTALACION DE ALMACENAMIENTO DE RESIDUOS DE BAJA Y MEDIA ACTIVIDAD DE SIERRA ALBARRANA (EL CABRIL LILW DISPOSAL FACILITY)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	No	2457	0	0	0	0	0	98.2	1.8	No
LILW-SL	Storage	Yes	2156	37.9	0	0	0	0	0	62.1	No

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal LILW CELDA	Yes	52803	79	0	0	0	0	8	13	No

Comment #5304: The additional characteristics of the waste

Processed: solid (non-dispersible), solid (dispersible), liquid (aqueous), liquid (organic), sludge, resin

Comment #9777: EL CABRIL: Volume disposed of

Corresponds to 23216 m3 as primary waste packages.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination	Yes			
Incineration			same	
Segregation/Sorting			same	
Super Compaction			increase	
Thermal Treatment (non incineration)			increase	

Processing - Conditioning method(s)

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

Reporting Group ENRESA, Site Structure: VANDELLOS

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR EN DESMANTELAMIENTO DE VANDELLOS I (VANDELLOS I NPP UNDER DORMANCY)

License Holder(s) : ENRESA

The following list the waste management facilities that are located at this site.

Facility: RMBA

Description	LILW

Storage part of the "RMBA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Capacity	Only for LLW-SL and LILW-LL arisen from the plant´s decommissioning.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
ATOC	building	2003	No	Yes	No	No
DGT	building	2003	No	Yes	No	No

Reporting Group ENRESA, Site Data: VANDELLOS

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: CENTRAL NUCLEAR EN DESMANTELAMIENTO DE VANDELLOS I (VANDELLOS I NPP UNDER DORMANCY)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage RMBA	Yes	1393	0	0	0	0	0	100	0	No

Comment #12197: Waste Storage facilities/Class LILW-SL/Site VANDEL
VLLW to be disposed of at the El Cabril centre

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-LL	Storage	Yes	1583	0	0	0	0	0	100	0	No

Comment #12198: Waste Storage facilities/Class LILW-LL/Site VANDEL
ILW operational waste (mainly, graphite)

Reporting Group ENUSA, Site Structure: Juzbado

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: FABRICA DE ELEMENTOS COMBUSTIBLES (NUCLEAR FUEL ASSEMBLIES MANUFACTURING PLANT)

License Holder(s) : ENUSA

The following list the waste management facilities that are located at this site.

Facility: RMBA

Description	LILW

Processing part of the "RMBA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1985, Estimate

Storage part of the "RMBA" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	Yes	Yes
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
STORAGE	building	1985	No	No	No	No

Reporting Group ENUSA, Site Data: Juzbado

Country: Spain, Kingdom of Reporting Year: 2005

Full Name: FABRICA DE ELEMENTOS COMBUSTIBLES (NUCLEAR FUEL ASSEMBLIES MANUFACTURING PLANT)

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage	Yes	462	0	100	0	0	0	0	0	No
LILW-LL	Storage	Yes	268	0	100	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Segregation/Sorting			same	

Processing - Conditioning method(s)

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

REGULATORS

Country: Spain, Kingdom of Reporting Year: 2005

Name	CSN
Full Name	Consejo de Seguridad Nuclear (Nuclear Safety Council)
Division	
City or Town	Madrid

Name	MITyC
Full Name	Ministerio de Industria, Turismo y Comercio (Ministry for Industry, Tourism and Trade)
Division	Dirección General de Política Energética y Minas (Directorate General for Energy Policy and Mines)
City or Town	Madrid

Name	MIMA
Full Name	MINISTERIO DE MEDIO AMBIENTE (MINISTRY FOR ENVIRONMENT)
Division	DIRECCION GENERAL DE CALIDAD Y EVALUACION AMBIENTAL (DIRECTORATE GENERAL FOR ENVIRONMENTAL QUALITY AND ASSESSMENT)
City or Town	MADRID

Attachment #1192: This attached chart shows the relationships between ENRESA and the different Institutions and Organisations involved in Radioactive Waste Management

File name: Institutional chart.doc

REGULATIONS / LAWS

Country: Spain, Kingdom of Reporting Year: 2005

Name	ENRESA	
Title or Name	ROYAL DECREE 1349/2003, of 31st October, on the governance of activities performed by the Empresa Nacional de Residuos Radiactivos, S.A. (ENRESA) and their financing.	
Reference Number	RD1349/2003	
Date Promulgated or Proclaimed	2003-10-31	Regulation

Attachment #1190: Royal Decree 1349/2003 (in Spanish)

File name: RD 1349-2003.pdf

File type: PDF Document

Attachment #1222: Provides the new wording for additional provision six of the Electricity Industry Act, Law 54/1997 of November 27th, with regard to the Fund for financing of General Radioactive Waste Plal activities

File name: RD 5-2005 ingles.doc

File type: MS Office Document

Name	nuc act	
Title or Name	The Nuclear Energy Act, Law 25/1964, has, since its appaearance, regulated the development and control of Nuclear energy in Spain. The Act introduces and defines basic concepts, among which the following warrant special attention: 1 Udentification of administrative authorities and organisations 2. Definitions 3. System of authorisations 4. Measures for safety and protection against ionising radiations 5. Civil liability deriving fron nuclear damage 6. Infringement and administrative penalties	
Reference Number		
Date Promulgated or Proclaimed	1964-04-29	Law

Name	CSN	
Title or Name	This Law constitutes the CSN as sole organisation responsible for nuclear safety and radiation protection, the Council being independent from the Government and the rest of the Adminsitration and having the power to carry out the necessary inspections and assessments of nuclear facilities in order to guarantee nuclear safety and radiological protection	
Reference Number		
Date Promulgated or Proclaimed	1980-04-22	Law

REGULATIONS / LAWS

Country: Spain, Kingdom of Reporting Year: 2005

Name	RD 1836/99	
Title or Name	The Regulation on Nuclear and Radioactive installations is the most important of the standards for enactment of the Nuclear Energy Act. It establishes the procedure for licensing of facilities at which nuclear and radioactive activities are carried out. It defines in detail the types and categories of such facilities nd establishes as a general standard that the installations are subjected to a system of authorisations to be awarded.	
Reference Number		
Date Promulgated or Proclaimed	1999-12-03	Regulation

Name	RD 413/97	
Title or Name	The Royal Decree on the radiation protection of external workers subjected to the risk of exposure to ionising radiations due to their intervening in the controlled zone incorporated the corresponding Community Directive into the Spanish legal system. Although it does not specifically refer to the area of waste management, the latter is of great importance in the Decree since most of these activities are carried out by collaborating organisations.	
Reference Number		
Date Promulgated or Proclaimed	1997-04-16	Regulation

Name	Elect act	
Title or Name	Electricity Industry Act 54/1997	
Reference Number		
Date Promulgated or Proclaimed	1997-11-27	Law

Attachment #1221: Definition of radioactive waste and coverage

File name: Electricity Industry Act 54 1997.doc

File type: MS Office Document

MILESTONES

Country: Spain, Kingdom of | Reporting Year: 2005

Start Year or Reference Year:	1951	End Year	
Description of Milestone			
The Nuclear Energy Board (JEN) was created as the organization in charge of all fields related to nuclear energy. In 1986 it was renamed CIEMAT.			

Start Year or Reference Year:	1964	End Year	
Description of Milestone			
The Spanish Nuclear Energy Law was enacted			

Start Year or Reference Year:	1968	End Year	
Description of Milestone			
The first Spanish NPP (C.N. Jose Cabrera) was connected to the grid			

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
The Spanish Nuclear Safety Council was created			

Start Year or Reference Year:	1984	End Year	
Description of Milestone			
The Spanish Radioactive Waste Management Company (ENRESA) was created by Royal Decree			

Start Year or Reference Year:	1987	End Year	
Description of Milestone			
The Spanish First General Radioactive Waste Plan was approved by the Government.			

Start Year or Reference Year:	1991	End Year	1994
Description of Milestone			
Decommissioning of the Uranium Milling Plant of Andujar (FUA)			

Start Year or Reference Year:	1992	End Year	
Description of Milestone			
The operational license for El Cabril facility was granted			

Start Year or Reference Year:	1998	End Year	2004
Description of Milestone			
Vandellos I NPP decommissioning (stage 2).			

Start Year or Reference Year:	2006	End Year	
Description of Milestone			
The Sixth General Radioactive Waste Plan is approved by the Government			

Policies

Country: Spain, Kingdom of | Reporting Year: 2005

National Systems

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

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

Attachment #1191: The General Radioactive Waste Plan (GRWP, July 1999) has been drawn up in accordance with the contents of article 4 of Royal 1522/1984, of 4th July.

File name: plan.pdf

File type: PDF Document

Member State's Reference # NIPO: 236-99-007-2 / D.L.: M-39281-1999

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Incomplete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete

Regulatory Body Responsibility

Policies

Country: Spain, Kingdom of | **National Systems** | Reporting Year: 2005

20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Attachment #1220: Regulation related to the management of solid waste material with radioactive content generated at category 2 and 3 radioactive facilities where non-encapsulated radioactive isotopes are handled or stored. (clearance levels)

File name: RD 1349-2003 ingles.doc

File type: MS Office Document

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

Policies

Country: Spain, Kingdom of **Processing/Storage** Reporting Year: 2005

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	No
62	waste storage	No
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Comment #7567: PROCEDURES

SEPARETE FOR PROCESSING/SORTING. COMMON FOR DISPOSAL

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

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	Yes
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)

Policies

98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	Yes
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for

Sweden

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:27:44

Waste Class Matrix(ces) Used/Defined

Country: Sweden, Kingdom of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	**X**			
processed		**X**	**X**	**X**

Groups Overview

Country: Sweden, Kingdom of Reporting Year: 2005

Reporting Group: **CLAB**

Inventory Reporting Date: December 2005

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 2005

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		
	Solid	processing		
	FKA			disposal
OKG	Cement	processing		
	Compaction	processing		
	Dewater	processing		
	Solid	processing		
	OKG		storage	
	OKG			disposal
Ringhals	Cement	processing		
	Compaction	processing		
	Solid	processing		
	Ringhals			disposal

Reporting Group: **Repository**

Inventory Reporting Date: December 2005

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

Groups Overview

Country: Sweden, Kingdom of Reporting Year: 2005

Reporting Group: **Studsvik**

Inventory Reporting Date: December 2005

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

Reporting Group CLAB, Site Structure: CLAB

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Central Interim Storage Facility for Spent Nuclear Fuel

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

The following list the 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 the "CLAB" facility

The following shows storage status for waste classes, and SRS.

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

List SRS?	No
Capacity	

Types of Storage Units

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

Reporting Group CLAB, Site Data: CLAB

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Central Interim Storage Facility for Spent Nuclear Fuel

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-LL	Storage	No	619	100	0	0	0	0	0	0	No

Reporting Group NPP, Site Structure: Barseback

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Barsebäck Nuclear Power Plant

License Holder(s) : Barseback Kraft AB

The following list the waste management facilities that are located at this site.

Facility: Bit

Description	Solidification of ion exchange resins in bitumen

Processing part of the "Bit" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1980

Facility: Cement

Description	Conditioning of ion exchange resins in cement

Processing part of the "Cement" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	, Unknown

Facility: Compaction

Description	Compaction of low active scrap and trash

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1980

Reporting Group NPP, Site Structure: Barseback

Country: Sweden, Kingdom of Reporting Year: 2005

Facility: Dewater

Description	Dewatering ion exchange resins in waste container

Processing part of the "Dewater" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1980

Reporting Group NPP, Site Data: Barseback

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Barsebäck Nuclear Power Plant

Inventory Reporting Date: December 2005 Waste Matrix: IAEA Def.

Processing - Treatment method(s)

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

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				Yes
Cementation	Yes			

Comment #7604: status of facilities

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

Reporting Group NPP, Site Structure: Forsmark

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Forsmark Nuclear Power Plant

License Holder(s) : Forsmark Kraftgrupp AB

The following list the waste management facilities that are located at this site.

Facility: Bit

Description	Bituminisation of ion exchange resins

Processing part of the "Bit" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1988

Facility: Compaction

Description	Compation of low active scrap and trash

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1988

Facility: Solid

Description	Solid waste backfilled with cement in waste containers

Processing part of the "Solid" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1986

Reporting Group NPP, Site Structure: Forsmark

Country: Sweden, Kingdom of Reporting Year: 2005

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 the "FKA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	42500	Capacity -planned (m3)	42500
Depth (m)	0		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
operation		1989	2040

Reporting Group NPP, Site Data: Forsmark

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Forsmark Nuclear Power Plant

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	3900	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Reporting Group NPP, Site Structure: OKG

Country: Sweden, Kingdom of

Reporting Year: 2005

Full Name: OKG Nuclear Power Plant

License Holder(s) : OKG AB

The following list the waste management facilities that are located at this site.

Facility: Cement

Description	Cement solidification of ion exchange resins

Processing part of the "Cement" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1972

Facility: Compaction

Description	Compaction of scrap and trash with low activity contents

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1972

Facility: Dewater

Description	Dewatering of ion exchange resins

Processing part of the "Dewater" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1980

Facility: Solid

Description	Scrap and trash backfilled with cement in waste container

Processing part of the "Solid" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1972

Facility: OKG

Description	Rock cavern for storage of LILW

Storage part of the "OKG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

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

Reporting Group NPP, Site Structure: OKG

Country: Sweden, Kingdom of | Reporting Year: 2005

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 the "OKG" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	7500	Capacity -planned (m3)	16000
Depth (m)	0		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
operation		1987	2040

Reporting Group NPP, Site Data: OKG

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: OKG Nuclear Power Plant

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	7500	100	0	0	0	0	0	0	No
LILW-LL	Storage	Yes	913	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

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

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.

Processing - Conditioning method(s)

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

Reporting Group NPP, Site Structure: Ringhals

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Ringhals Nuclear Power Plant

License Holder(s) : Ringhals AB

The following list the waste management facilities that are located at this site.

Facility: Cement

Description	Conditioning of resins with cement

Processing part of the "Cement" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1974

Facility: Compaction

Description	Compaction of scrap and trash containing small activity quantities

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1982

Facility: Solid

Description	Scrap and trash backfilled with cement

Processing part of the "Solid" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1977

Reporting Group NPP, Site Structure: Ringhals

Country: Sweden, Kingdom of Reporting Year: 2005

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 the "Ringhals" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	3500	Capacity -planned (m3)	10000
Depth (m)	0		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
operation		1993	2040

Reporting Group NPP, Site Data: Ringhals

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Ringhals Nuclear Power Plant

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	3500	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

Reporting Group Repository, Site Structure: SFL 3-5

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Repository for LILW-LL

License Holder(s) :

The following list the waste management facilities that are located at this site.

Facility: SFL 3-5

Description	Repository for LILW-LL

Disposal part of the "SFL 3-5" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	Yes
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	Yes
List SRS	No				

Type	rock cavern (under sea, land access)		
Facility is non modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	20000
Depth (m)	200-300		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
operation		2045	2060

Reporting Group Repository, Site Structure: SFR 1

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Repository for Radioactive Operational Waste

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

The following list the waste management facilities that are located at this site.

Facility: SFR 1

Description	Repository for disposal of operational LILW in underground cavities excavated in crystalline rock

Disposal part of the "SFR 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	No	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	rock cavern (under sea, land access)		
Facility is non modular			
Capacity - existing (m3)	63000	Capacity -planned (m3)	63000
Depth (m)	>50		
Host medium	crystalline rock (granite)		

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

Reporting Group Repository, Site Data: SFR 1

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Repository for Radioactive Operational Waste

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	35000	90	0	0	10	0	0	0	No

Reporting Group Repository, Site Structure: SFR 3

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Repository for decommissioning waste

License Holder(s) :

The following list the waste management facilities that are located at this site.

Facility: SFR 3

Description	Repository for disposal of LILW from decommissioning

Disposal part of the "SFR 3" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	rock cavern (under sea, land access)		
Facility is non modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	150000
Depth (m)	50		
Host medium	crystalline rock (granite)		

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

Reporting Group Studsvik, Site Structure: Studsvik

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Studsvik Research Center

License Holder(s) : Studsvik AB

AB SVAFO

The following list the 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 the "Cement" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1999

Facility: Compaction

Description	Compaction of low active waste in containers

Processing part of the "Compaction" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1970

Facility: Hot cell

Description	Shielded treatment and conditioning of solid LILW. Cement as backfill in waste container.

Processing part of the "Hot cell" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	, Unknown

Reporting Group Studsvik, Site Structure: Studsvik

Country: Sweden, Kingdom of Reporting Year: 2005

Facility: Incin

Description	Inciniration of low active trash

Processing part of the "Incin" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1976

Facility: Melting

Description	Melting of low active scrap

Processing part of the "Melting" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1987

Facility: Studsvik

Description	Rock cavern for storage of LILW

Storage part of the "Studsvik" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	Yes	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

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

Reporting Group Studsvik, Site Structure: Studsvik

Country: Sweden, Kingdom of Reporting Year: 2005

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 the "Studsvik" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is modular			
Capacity - existing (m3)	900	Capacity -planned (m3)	1200
Depth (m)	0		
Host medium	crystalline rock (granite)		

Phase	Estimate	Start Year	End Year
operation		1987	2040

Reporting Group Studsvik, Site Data: Studsvik

Country: Sweden, Kingdom of Reporting Year: 2005

Full Name: Studsvik Research Center

Inventory Reporting Date: December 2005 Waste Matrix: 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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Disposal	Yes	900	0	0	0	100	0	0	0	No
LILW-LL	Storage	Yes	2000	0	0	0	100	0	0	0	No

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

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

REGULATORS

Country: Sweden, Kingdom of

Reporting Year: 2005

Name	SSI
Full Name	Swedish Radiation Protection Authority
Division	
City or Town	Stockholm

Name	SKI
Full Name	Swedish Nuclear Power Inspectorate
Division	
City or Town	Stockholm

REGULATIONS / LAWS

Country: Sweden, Kingdom of Reporting Year: 2005

Name	Nuc Act	
Title or Name	The Nuclear Activities Act	
Reference Number	1984:3	
Date Promulgated or Proclaimed	1984-01-01	Law

Name	NucActOrd	
Title or Name	Nuclear Activities Ordinance	
Reference Number	1984:14	
Date Promulgated or Proclaimed	1984-01-01	Law

Name	Safety Reg	
Title or Name	Regulations Concerning Safety in Certain Nuclear Facilities	
Reference Number	SKI FS 2004:1	
Date Promulgated or Proclaimed	2005-01-01	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	1998-01-01	Regulation

Name	Archive	
Title or Name	Regulations Concerning Archives at Nuclear Installations	
Reference Number	SSI FS 1997:1	
Date Promulgated or Proclaimed	1997-01-01	Regulation

REGULATIONS / LAWS

Country: Sweden, Kingdom of

Reporting Year: 2005

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	1992-01-01	Law

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	1981-01-01	Law

MILESTONES

Country: Sweden, Kingdom of Reporting Year: 2005

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			

Country Waste Profile Report for Switzerland

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:28:02

Waste Class Matrix(ces) Used/Defined

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

Comment #7198: Matrix use

The IAEA standard waste classification system is not applied within offical reports on radwaste in Switzerland. In the context of NEWMDB, it is, however, adopted as default to meet basic technical requirements for the definition of reporting groups within the database (i.e. need for waste matrix allocation) in case of reporting groups without any associated classification system (e.g. because there is no official reporting at all).

Waste Class Matrix: Nagra

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
SMA	97	3	0
LMA	0	100	0
HAA	0	0	100

Description: Classification scheme adopted by Nagra for provisional waste allocation to planned SMA and HAA/LMA repositories within Swiss disposal programme in 1985-2002 [kept in NEWMDB up to decisions on site/concept of new SMA repository]. Precise classification rules have not yet been established; the basic criterion is that the system of repositories and allocated wastes can be demonstrated to comply with the national overall long-term safety targets stated in HSK-R-21 (November 1993).

Comment #345: Waste class SMA

SMA (low-level and short-lived intermediate level waste) shall be disposed of in a geologic repository, EL-SMA. This stream covers all LILW-SL (suitable for near-surface disposal) and might, from a technical point of view, also include part of LILW-LL (wastes slightly passing IAEA limit on specific alpha activity in LILW-SL). The volume of this LILW-LL fraction can be expected to be up to a few percent of the total SMA volume; the distribution factors given represent a rough estimate.

Comment #346: Waste class LMA

LMA (long-lived intermediate-level waste) refers to the fraction of LILW-LL which cannot be disposed of in an EL-SMA.

Comment #347: Waste class HAA

HAA (high-level waste) denote canisters with vitrified HLW from reprocessing spent Swiss fuel in France and Great Britain, being returned to Switzerland.

Comment #360: Waste class BE

Not included. IAEA has explicitly excluded BE (spent fuel) from reporting in NEWMDB.

Waste Class Matrix(ces) Used/Defined

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Waste Class Matrix: NEA-SD

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
MD	100	0	0
MDLC	85	15	0

Description: Classification scheme used by IAEA to report on Swiss waste disposed of by OECD/NEA sea dumping campaigns in the Atlantic Ocean between 1969 and 1982 (IAEA-TECDOC-1105 [August 1999], Annex A.11).

Comment #361: Waste class MD

MD (200-l metal drums), nominal volume 0.21 m3, include solidified (generally: cemented) waste. They are assumed to be LILW-SL.

Comment #362: Waste class MDLC

MDLC (metal drums lined with concrete) represent 200-l drums with cemented waste, grouted into a concrete container (nominal volume 0.98 m3) before shipment. Overpacking purposes are shielding (gamma emitters) and enhanced safety (alpha emitters, including Ra-226). Volume distribution over LILW-SL and LILW-LL is estimated on the basis of the alpha activities processed (AGNEB-165 [28.04.1983], table 1), the numbers of dumped MDLC (IAEA-TECDOC-1105 [1999], Annex A.11), and the assumption of a 60% use of the IAEA limits on specific activities for Ra-226 and other alpha emitters (AGNEB-165 [28.04.1983], p.4).

Waste Class Matrix(ces) Used/Defined

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Waste Class Matrix: HSK

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
KKB	100	0	0
KKG	97.3	2.7	0
KKL	100	0	0
KKM	99.9	0.1	0
PSI(HSK)	93.2	6.8	0
ZWILAG-u	96	4	0
ZWILAG-p	100	0	0
RPW-LILW	70	30	0
RPW-HLW	0	0	100

Description: Classification pattern to adopt HSK's actual practice in public reporting on radwaste accumulated at sites under HSK's supervision (see: Groups Overview - Reporting Group "HSK" - Comment #373) within the framework of NEWMDB.

Comment #363: Class Definitions

a) RPW-HLW and RPW-LILW: conditioned reprocessing wastes (vitrified HLW and others, respectively) returned to Switzerland by foreign reprocessors (Cogema, BNFL).

b) KKB, KKG, KKL, KKM: all wastes other than reprocessing wastes (generally: site-owned NPP operation wastes) stored at the pertinent NPP (KKB, KKG, KKL, KKM).

c) PSI(HSK): all federal wastes resulting from nuclear applications in medicine, industry and research - stored at facilities under HSK's supervision.

d) ZWILAG: all wastes other than reprocessing wastes stored at ZWILAG site (basically NPP operation/decommissing waste) - provisionally a distinction between unprocessed and processed waste (affixes "-u" and "-"p", respectively) is included to account for actual differences when applying IAEA's waste classification.

Comment #365: Volume Conversion to IAEA Classification System

Volume data for waste classes to be reported have been tentatively split into volumes for HLW, LILW-SL and LILW-LL, resulting in the factors (percentage values) outlined above as matrix elements, based on the technical criteria defined in IAEA Safety Guide 111-G-1.1 (1994), Table II.

The following methods were applied:

(a) assessment from the Swiss database system on radioactive materials (ISRAM) referring to package nuclide inventories at key date [standard] - using the criterion >4000 Bq alpha/g of package to separate LILW-LL from LILW-SL -, or

(b) best estimate [backup].

Except for reporting class "RPW-HLW", the conversion factors must be considered as non-static, just reflecting an assessment related to a key date.

Waste Class Matrix(ces) Used/Defined

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

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	X	X		
processed			X	X

Comment #12140: Definitions for Unprocessed and Processed Waste

Waste volume data in the Reference Document for Reporting to NEWMDB (see comment #373) are given in terms of 2 categories - "unconditioned waste" and "conditioned waste".

The second category refers to waste which has been formally accepted by HSK as meeting the following general principle: "Radioactive waste shall be conditioned in such a way that the resulting waste forms, together with the packaging elements permanently tied to them, can be submitted to the waste management stages of transport, storage and disposal, without any further intrusive action, overpackaging measures remaining admissible". The first and complementary category, logically, includes all waste not yet complying with this principle.

In order to carry the Reference Document data unambiguously forward to NEWMDB, "unconditioned waste" and "conditioned waste" have been simply equalled to IAEA's terms "unprocessed waste" and "processed waste", respectively. Hence, data given for "processed waste" in NEWMDB in fact relate to waste considered as being processed for storage and, intentionally, also for disposal.

Groups Overview

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Note: The "2003 data collection cycle" asked Member States to report on wastes held at foreign facilities. Please see the following NEWMDB On Line Help page:

http://www-newmdb.iaea.org/showhelp.asp?Topic=18-4-1

However, some Member States had difficulty meeting this request for foreign reprocessing facilities. Additionally, Member States were divided on the issue. Some felt that the Member State in possession of foreign held waste should report it, others felt that the "owner" of the waste should report it, regardless of whether the waste was held abroad or not. Therefore, a decision was made to not publish information on foreign held waste until this matter was resolved.

Within this Groups Overview report, foreign waste management sites are indicated by italicized text. However, details of the sites (Site Structure) and the waste held (Site Data) are not published as part of this Member State's submission.

Please note, "sites" for the past practice of sea dumping are also denoted as "foreign" sites (italicized text). Details of the sites and the waste disposed are included in published Member State reports if this information was reported to the NEWMDB.

Reporting Group: **BAG**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Wastes from Nuclear Applications in Medicine, Industry and Research Held under BAG's Supervision

Site Name	Facility Name	Facilities Defined		
CERN	WMF@CERN	processing	storage	
PSI(BAG)	WMF@PSI-W	processing	storage	

Comment #7226: General

The Federal Office of Health (BAG) is the supervisory body for radwaste management activities at sites which do not fall under nuclear regulation in a legal sense [note: those are supervised by the Nuclear Safety Inspectorate (HSK)], dealing with a broad variety of waste producers in the field of nuclear applications in medicine, industry and research.

Waste arisings destined to disposal in a nuclear repository are

(a) collected on behalf of BAG (possibly after pretreatment, subject to fee) and routed to a national delivery point (PSI-East), where they are conditioned and stored under HSK's supervision (see: Reporting Group "HSK") - standard procedure for small producers, option for large nuclear research centres (CERN, PSI outside HSK's supervision), or

(b) storage after/without treatment or conditioning at site - standard procedure for large-sized decommissioning wastes of large nuclear research centres.

BAG has no legal obligation for public reporting on wastes falling under (b) [note: category (a) is included under reporting for PSI(HSK)]. Hence, information given is restricted to some qualitative issues.

Note, however, that registration of wastes of category (b) into the database system for Swiss radioactive wastes (ISRAM) has been accepted by PSI and CERN and is being implemented.

Groups Overview

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Reporting Group: **Foreign**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Swiss wastes stored outside Switzerland

Site Name	Facility Name	Facilities Defined		
ForeignRP (foreign)	BNFL	processing		
	Cogema	processing		

Comment #7229: General

All Swiss NPP's have current service contracts with BNFL (United Kingdom) and COGEMA (France) for the reprocessing of a qualified amount of spent fuel. These are subject to a return-of-waste clause which is exercised by both reprocessors.

Reprocessing wastes to be returned include, in both cases, vitrified HLW and a spectrum of LILW types which have been or are to be submitted to acceptance procedures in Switzerland (as well as in other countries concerned).

Known are the fuel deliveries (fuel assembly types, fuel masses, burnups) from [not reported in NEWMDB] and the waste returns to Switzerland [reported under site "ZWILAG"], up to the key date.

The overall amount of waste expected to be returned to Switzerland is known but not finalized, hence volumes are not reported.

Reporting Group: **HSK**

Inventory Reporting Date: December 2005

Waste Matrix Used: HSK

Description: Wastes from Swiss nuclear power industry, research reactors and other nuclear installations (including the national collection centre for Federal wastes at PSI-East) held under HSK's supervision

Site Name	Facility Name	Facilities Defined		
KKB	WMF@KKB	processing	storage	
KKG	WMF@KKG	processing	storage	
KKL	WMF@KKL	processing	storage	
KKM	WMF@KKM	processing	storage	
PSI(HSK)	WMF@PSI-E	processing	storage	
ZWILAG	WMF@ZWILAG	processing	storage	

Comment #373: Reference Document for Reporting to NEWMDB

HSK Supervision Report 2005, Appendix A, Tables 8 [KKB, KKG, KKL, KKM, PSI(HSK)] and 9 [ZWILAG].

Comment #374: Reporting on NPP sites

For NPP sites (KKB, KKG, KKL, KKM), the Reference Document provides data on total volumes for unprocessed and processed waste stored on site, without discrimination of individual local storage units. Under this constraint, (a) information on local waste management facilities is given collectively under "WMF@KKX", (b) waste data are presented for each site in terms of a generic "overall" storage unit (named "all@KKX"), (c) the start of both treatment/conditioning and storage operations is generically set equal to the first year of commercial operation of the NPP, and (d) the type of the "overall" storage unit is defined as "various" due to effective or potential variations within the set of locally available storage units [note: conditioned and solid unconditioned wastes are usually stored in buildings or bunkers, liquids or sludges awaiting treatment in tanks].

Comment #378: Reporting on PSI(HSK)

As for NPP sites, the Reference Document provides data on total volumes for unprocessed and processed waste stored at site PSI(HSK) - physically being a part of PSI-East (PSI-E) site - , not discriminating between individual local storage units. Under this constraint, (a) information on local waste management facilities is given collectively under "WMF@PSI-E", (b) waste data are presented for each site in terms of a generic "overall" storage unit (named "all@PSI-E"), (c) the start of both treatment/conditioning and storage operations is generically set equal to the first year of operation of PSI-East, and (d) the type of the "overall" storage unit is defined as "various" due to effective or potential variations within the set of locally available storage units [note: processed and solid unprocessed wastes are usually stored in buildings or bunkers, liquids or sludges awaiting treatment in tanks].

Comment #7224: Reporting on ZWILAG

In the case of ZWILAG, the central Swiss waste management facility owned by the 4 Swiss NPPs, the Reference Document includes information on allocation of identified wastes to distinct storage units. For the scope of NEWMDB, information on ZWILAG waste management facilities is summarized under "WMF@ZWILAG", the active storage units (Buildings H, M and further summarized under "others") being identified for comprehensiveness. Quantitative waste data in the Reference Report are not necessarily given in volume units and there is no explicit distinction between processed and unprocessed waste, thus requiring some data evaluation preceeding any input to NEWMDB.

Comment #7225: Reporting on Storage Capacities

Individual statements on site-specific storage capacities are omitted. As NPPs can use the large storage capacity of ZWILAG, problems with NPP waste storage are not expected to occur. At PSI-East, a need for increased capacity could be solved in time by adding further storage buildings or by use of ZWILAG storage capacity.

Reporting Group: **Nagra**

Inventory Reporting Date: December 2005

Waste Matrix Used: Nagra

Description: Swiss Repository Projects

Site Name	Facility Name	Facilities Defined		
EL-HAA/LMA	DU-HAA			disposal
	DU-LMA			disposal
EL-SMA	DU-SMA			disposal

Comment #7287: General

Nagra, the National Cooperative for the Disposal of Radioactive Waste, has been founded in 1972 as a private organization in order to manage the task of finding and planning Swiss radwaste repositories. Shareholders are the Swiss nuclear power industry and the Swiss Confederation (on account of waste arisings from nuclear applications in medicine, industry and research).

Due to the actual state of Nagra's programmes, reported information will frequently include generic statements.

Reporting Group: **NEA-SD**

Inventory Reporting Date: December 2005

Waste Matrix Used: NEA-SD

Description: OECD/NEA sea dumping

Site Name	Facility Name	Facilities Defined		
N-Atlantic (foreign)	Sea Floor			disposal

Comment #372: Waste volumes

See IAEA-TECDOC-1105 (August 1999), Annex A.11.

Reporting Group BAG, Site Structure: CERN

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Centre Européen pour la Recherche Nucléaire

License Holder(s) : "Not licensed as a nuclear facility" / Organisation Européenne pour la Recherche Nucléaire

Comment #7294: CERN Wastes

CERN is located at the Swiss/French border, extending into both countries, and has the status a international research facility. Radwastes arise from operation and decommissioning of accelerators and experimental equipment. There is a general understanding that these wastes will be routed to disposal within the two host countries, but final decisions have not been made.

A small fraction of "Swiss" wastes, e.g. incinerable waste, is traditionally routed to the national delivery point (PSI-East) for treatment, conditioning and subsequent storage.

The remaining wastes, e.g. large-sized decommissioning waste, are stacked, partially after pretreatment, at dedicated CERN buildings, awaiting free release or conditioning. A project aiming at characterizing and inventorying pertinent wastes according to HSK standards has been launched in 2003, in order to meet potential requirements for subsequent disposal in a Swiss repository and to evaluate optimized conditioning methods.

Potential waste arisings for disposal in Switzerland are estimated to be in the order of 10,000 - 20,000 m3 (conditioned) LILW-SL.

The following list the waste management facilities that are located at this site.

Facility: WMF@CERN

Description	CERN Waste Management Facilities

Processing part of the "WMF@CERN" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1970, Estimate

Storage part of the "WMF@CERN" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@CERN	building	1970	No	No	No	No

Reporting Group BAG, Site Structure: PSI(BAG)

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Paul-Scherrer-Institut (Facilities under BAG supervision)

License Holder(s) : "Not licensed as a nuclear facility" / Paul-Scherrer-Institut

Comment #7296: PSI(BAG) Wastes

Wastes arising from decommissioning of accelerators and experimental equipment at PSI-West are, normally, not routed to the national delivery point at PSI-East. Instead, they are conditioned by grouting in large concrete containers which are used afterwards as shielding elements at site.

Due to their functionality, such waste-containing shielding elements are not (yet) waste in a legal sense, and any reference to "storage units" at PSI-West must be related to that aspect.

Expected overall volume for conditioned waste is around 10,000 m3 LILW-SL.

The following list the waste management facilities that are located at this site.

Facility: WMF@PSI-W

Description	Waste Management Facilities at PSI-West

Processing part of the "WMF@PSI-W" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	No	No	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1980, Estimate

Storage part of the "WMF@PSI-W" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
LILW-SL	Yes	Yes	LILW-LL	No	No
HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@PSI-W	building	1980	No	No	No	No

Reporting Group HSK, Site Structure: KKB

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Beznau

License Holder(s) : Nordostschweizerische Kraftwerke AG, CH-5400 Baden

The following list the waste management facilities that are located at this site.

Facility: WMF@KKB

Description	Waste Management Facilities at KKB

Processing part of the "WMF@KKB" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1969

Storage part of the "WMF@KKB" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	Yes	Yes	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@KKB	various	1969	No	No	No	No
Type comment:	Refer to comment #374 under topic "Reporting Group : HSK"					

Reporting Group HSK, Site Data: KKB

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Beznau

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
KKB	Storage WMF@KKB	No	121	100	0	0	0	0	0	0	No
KKB	Storage WMF@KKB	Yes	1084	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Decontamination			same	
Evaporation				Yes

Processing - Conditioning method(s)

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

Reporting Group HSK, Site Structure: KKG

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Gösgen

License Holder(s) : Kernkraftwerk Gösgen-Däniken AG, Däniken

The following list the waste management facilities that are located at this site.

Facility: WMF@KKG

Description	Waste Management Facilities at KKG

Processing part of the "WMF@KKG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1979

Storage part of the "WMF@KKG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	Yes	Yes
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@KKG	various	1979	No	No	No	No
Type comment:	Refer to comment #374 under topic "Reporting Group : HSK"					

Reporting Group HSK, Site Data: KKG

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Gösgen

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
KKG	Storage WMF@KKG	No	31	100	0	0	0	0	0	0	No
KKG	Storage WMF@KKG	Yes	168	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Calcination			same	
Decontamination			same	
Evaporation			same	

Processing - Conditioning method(s)

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

Reporting Group HSK, Site Structure: KKL

Country: Switzerland (Swiss Confederation) | Reporting Year: 2005

Full Name: Kernkraftwerk Leibstadt

License Holder(s) : Kernkraftwerk Leibstadt AG

The following list the waste management facilities that are located at this site.

Facility: WMF@KKL

Description	Waste Management Facilities at KKL

Processing part of the "WMF@KKL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1984

Storage part of the "WMF@KKL" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	Yes	Yes	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@KKL	various	1984	No	No	No	No
Type comment:	Refer to comment #374 under topic "Reporting Group : HSK"					

Reporting Group HSK, Site Data: KKL

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Leibstadt

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
KKL	Storage WMF@KKL	No	38	100	0	0	0	0	0	0	No
KKL	Storage WMF@KKL	Yes	1445	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination			same	
Evaporation			same	
Size Reduction			same	
Super Compaction				Yes

Comment #7281: Supercompaction

Between the late 80's and 2001, KKL was temporarily hosting a mobile supercompactor for treatment of compactable mixed NPP waste, as a joint venture of all Swiss NPPs. In future, such treatment would be performed at ZWILAG.

Processing - Conditioning method(s)

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

Reporting Group HSK, Site Structure: KKM

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Mühleberg

License Holder(s) : BKW FMB Energie AG

The following list the waste management facilities that are located at this site.

Facility: WMF@KKM

Description	Waste Management Facilities at KKM

Processing part of the "WMF@KKM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1971

Storage part of the "WMF@KKM" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	Yes	Yes
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@KKM	various	1971	No	No	No	No
Type comment:	Refer to comment #374 under topic "Reporting Group : HSK"					

Reporting Group HSK, Site Data: KKM

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Kernkraftwerk Mühleberg

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
KKM	Storage WMF@KKM	No	71	100	0	0	0	0	0	0	No
KKM	Storage WMF@KKM	Yes	1036	100	0	0	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination			same	
Size Reduction			same	
Thermal Treatment (non incineration)			same	

Processing - Conditioning method(s)

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

Reporting Group HSK, Site Structure: PSI(HSK)

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Paul-Scherrer-Institut (Facilities under HSK supervision)

License Holder(s) : Paul-Scherrer-Institut

The following list the waste management facilities that are located at this site.

Facility: WMF@PSI-E

Description	Waste Management Facilities at PSI-East (Nuclear Facilities under HSK supervision)

Processing part of the "WMF@PSI-E" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1967

Storage part of the "WMF@PSI-E" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	Yes	Yes	ZWILAG-u	No	No
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
all@PSI-E	various	1967	No	No	No	No
Type comment:	Refer to comment #378 under topic "Reporting Group : HSK"					

Reporting Group HSK, Site Data: PSI(HSK)

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Paul-Scherrer-Institut (Facilities under HSK supervision)

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
PSI(HSK)	Storage WMF@PSI-E	No	459	0	0	0	58.8	0	41.2	0	Yes
PSI(HSK)	Storage WMF@PSI-E	Yes	1109	0.3	0	0	87.3	0	12.4	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Incineration				Yes
Metal Melting			same	
Size Reduction			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			same	
Encapsulation			same	
Grouting			same	

Reporting Group HSK, Site Structure: ZWILAG

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Zentrales Zwischenlager Würenlingen

License Holder(s) : Zwischenlager Würenlingen AG

The following list the waste management facilities that are located at this site.

Facility: WMF@ZWILAG

Description	Waste Management Facilities at ZWILAG

Processing part of the "WMF@ZWILAG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	Yes	Yes
ZWILAG-p	No	No	RPW-LILW	No	No
RPW-HLW	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2001

Storage part of the "WMF@ZWILAG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
KKB	No	No	KKG	No	No
KKL	No	No	KKM	No	No
PSI(HSK)	No	No	ZWILAG-u	Yes	Yes
ZWILAG-p	Yes	Yes	RPW-LILW	No	Yes
RPW-HLW	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Lager H	building	2001	No	No	No	No
Lager M	bunker	2001	No	No	No	No
others	building	2001	No	No	No	No

Reporting Group HSK, Site Data: ZWILAG

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Zentrales Zwischenlager Würenlingen

Inventory Reporting Date: December 2005 Waste Matrix: HSK

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
ZWILAG-u	Storage WMF@ZWILAG	No	341	62.7	0	0	0.5	0	36.8	0	Yes
ZWILAG-p	Storage WMF@ZWILAG	Yes	261	94.6	0	0	0.4	0	5	0	Yes
RPW-HLW	Storage WMF@ZWILAG	Yes	35	0	0	100	0	0	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Decontamination			increase	
Incineration			increase	
Metal Melting			increase	
Super Compaction		Yes		

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Casting (of metal and slag)			increase	
Cementation		Yes		
Grouting		Yes		

Comment #9721: ZWILAG Plasma Arc Incinerator/Melter

Facilty designed to incinerate/decompose/melt mixed waste (organics, metals, inorganics) fed in drums by very high temperature treatment.. Primary process residues are molten slag (non-metallic residues immersed into molten glass) and molten metals. These are casted into 145 l moulds. After waste product solidification by cooling, the moulds are overpacked in 200 l drums.

Active commissioning of the facility has started in November 2004.

Reporting Group Nagra, Site Structure: EL-HAA/LMA

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Swiss repository project for high-level and long-lived intermediate-level waste

License Holder(s) :

Comment #355: Programme status EL-HAA/LMA (12/2004)

Feasibility demonstration for an EL-HAA/LMA in 1985 (Projekt Gewaehr 85), based on deep geologic disposal in crystalline host rock in northern Switzerland, led to follow-up project for completion of disposal feasibility demonstration. Subsequent extensive field investigations in areas of promising rock formations (crystalline and, as an extension, Opalinus clay in the northern part of the Canton of Zurich) lead to a supplementary feasibility study (Entsorgungsnachweis) which has been submitted to authorities in 2002, referring to Opalinus clay as candidate host rock; decision of Swiss Government is expected for 2006. Other options (multinational repository, crystalline host rock) are not to be ruled out yet.

Comment #7285: Information on Disposal Unit Capacities

Capacity numbers given are rough GUIDELINES FOR SITE SELECTION PURPOSES and refer to wastes at emplacement into disposal areas (i.e. they account for overpacking into disposal containers within repository site facilities). A reserve volume for spent fuel is included in the capacity planned for HAA disposal units. With the basic scenario, Swiss repositories defined below shall accommodate all Swiss radwaste (i.e. of NPP and any other origin) arisings as nowadays stored or being accumulated in future, until all of the Swiss NPP actually in operation are decommissioned. Note that these capacity data represent by definition an upper envelope for waste arisings which have been defined for safety assessment reports and engineering studies, relying on distinct scenarios. Excavation will be adjusted at construction time to meet effective needs.

Comment #9718: Conditioning Facilities Envisaged for EL-HAA/LMA

According to Nagra's actual plans, delivered waste units shall be conditioned / overpacked after reception at the site, before transport to disposal units:

(a) LMA units (small size packages): to be emplaced/grouted into standardized LMA disposal containers;

(b) canisters with vitrified HLW from reprocessing in transport & storage containers (TSC) : unloading from TSC, emplacement into disposal containers (cast iron), welding of the HAA disposal container.

[note: if direct disposal of spent fuel is to be planned/performed:

(c) spent fuel in TSC: transfer from TSC into BE disposal container, sealing of BE disposal container.]

The following list the waste management facilities that are located at this site.

Facility: DU-HAA

Description	Disposal Unit(s) for HAA

Disposal part of the "DU-HAA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
SMA	No	No	LMA	No	No
HAA	No	Yes			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	10000
Depth (m)	600-700		
Host medium	sedimentary rock (consolidated clay)		

Reporting Group Nagra, Site Structure: EL-HAA/LMA

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1972	
design		2000	

Facility: DU-LMA

Description	Disposal Unit(s) for LMA

Disposal part of the "DU-LMA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
SMA	No	No	LMA	No	Yes
HAA	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	10000
Depth (m)	600-700		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1972	
design		2000	

Reporting Group Nagra, Site Structure: EL-SMA

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Full Name: Swiss repository project for low-level and short-lived intermediate-level waste

License Holder(s) :

Comment #353: Project status EL-SMA (12/2004)

Feasibility demonstration for an EL-SMA repository (Projekt Gewähr 1985) accepted by authorities in 1988. After a site selection procedure, Wellenberg, Canton of Nidwalden, has been selected as EL-SMA site in 1993 (application for general license to Confederation in 1994). Apart from licensing according to Atomic Law, a cantonal mining concession is required in Nidwalden for repository-bound excavation; this concession is subject to public referendum. Mining concession has been disapproved twice by the people of Nidwalden - 1995 (for exploratory drift and repository) and 2002 (for exploratory drift only) - despite the fact that the repository concept had been modified since 1995 to meet primary public concerns (extended monitoring, enhanced retrievability). After the 2002 vote, Wellenberg site has been abandoned by the potential operator.

In 2003, the Federal Government implemented a working group to provide input to the process of site selection; first results are expected late 2004/2005. In parallel, Nagra started scientifically-based re-evaluation of siting options for an EL-SMA. Nagra will be able to present a proposal on how to proceed only when the boundary conditions for the site selection process have been clarified by the Federal Government. This is not expected to happen before 2006.

Comment #354: Project characteristics EL-SMA (12/2004)

EL-SMA facility description must be considered as being open. The total capacity envisaged remains, however, unaltered.

Comment #7286: Information on Disposal Unit Capacity

The capacity numbers given are rough GUIDELINES FOR SITE SELECTION PURPOSES and refer to wastes at emplacement into disposal areas (i.e. they account for overpacking into disposal containers within repository site facilities). With the basic scenario, Swiss repositories defined below shall accommodate all Swiss radwaste (i.e. of NPP and any other origin) arisings as nowadays stored or being accumulated in future, until all of the Swiss NPP actually in operation are decommissioned. Note that these capacity data represent by definition an upper envelope for waste arisings which have been defined for safety assessment reports and engineering studies, relying on distinct scenarios. Excavation will be adjusted at construction time to meet effective needs.

Comment #9719: Conditioning Facilities Envisaged for EL-SMA

After reception at the site, delivered waste units shall be conditioned / overpacked before transport to disposal units:

(a) Small-size packages: to be emplaced/grouted into standardized SMA disposal containers.

The following list the waste management facilities that are located at this site.

Facility: DU-SMA

Description	Disposal Unit(s) at EL-SMA

Disposal part of the "DU-SMA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
SMA	No	Yes	LMA	No	No
HAA	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	Yes
List SRS	No				

Reporting Group Nagra, Site Structure: EL-SMA

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Type	geological (cavern)		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	150000
Depth (m)			
Host medium	unknown (site not selected)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1978	
site selection		2003	

REGULATORS

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Name	HSK
Full Name	Swiss Federal Nuclear Safety Inspectorate
Division	Division for Transport and Waste Management Safety (SITE)
City or Town	CH-5232 Villigen-HSK

Comment #6658: Domain of Regulation / Supervision

Radwaste management at sites / facilities licensed under the Nuclear Energy Act (KEG).

Name	BAG
Full Name	Swiss Federal Office for Public Health
Division	Radiation Protection
City or Town	CH-3003 Berne

Comment #7233: Domain of Regulation / Supervision

Radwaste management at sites / facilities not licensed under the Nuclear Energy Act (KEG).

REGULATIONS / LAWS

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Name	KEG	
Title or Name	Nuclear Energy Act	
Reference Number	732.1	
Date Promulgated or Proclaimed	2003-03-21	Law

Comment #7193: Status

Date of entry into force: 2005-02-01, with repeal of the Atomic Energy Act (AtG) of 1959-12-23 and the Federal Decree on the Atomic Energy Act (AtG/BB) of 1978-10-06.

Name	KEV	
Title or Name	Nuclear Energy Ordinance	
Reference Number	732.11	
Date Promulgated or Proclaimed	2004-12-10	Law

Comment #7194: Status

Date of entry into force: 2005-02-01.

Name	StSG	
Title or Name	Radiological Protection Act	
Reference Number	814.50	
Date Promulgated or Proclaimed	1991-03-22	Law

Name	StSV	
Title or Name	Radiological Protection Ordinance	
Reference Number	814.501	
Date Promulgated or Proclaimed	1994-06-22	Law

Name	StiFV	
Title or Name	Federal Ordinance on the Decommissioning Fund for Nuclear Facilities	
Reference Number	732.013	
Date Promulgated or Proclaimed	1983-12-05	Law

REGULATIONS / LAWS

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Name	VHV	
Title or Name	Ordinance on Preparatory Measures	
Reference Number	732.012	
Date Promulgated or Proclaimed	1989-11-27	Law

Name	VARA	
Title or Name	Ordinance on the Collection of Radioactive Waste (BAG supervision area)	
Reference Number	814.557	
Date Promulgated or Proclaimed	2002-09-03	Law

Name	R-14	
Title or Name	Requirements for Conditioning of Radioactive Waste	
Reference Number	HSK-R-14	
Date Promulgated or Proclaimed	2004-03-01	Regulation

Name	R-21	
Title or Name	Protection Objectives for the Disposal of Radioactive Waste	
Reference Number	HSK-R-21	
Date Promulgated or Proclaimed	1993-11-01	Regulation

Name	EntsFV	
Title or Name	Federal Ordinance on the Waste Management Fund for Nuclear Power Plants	
Reference Number	732.014	
Date Promulgated or Proclaimed	2000-03-06	Law

REGULATIONS / LAWS

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Name	LDC	
Title or Name	London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter	
Reference Number		
Date Promulgated or Proclaimed	1972-12-29	Regulation

Name	R-52	
Title or Name	Transport and Storage Casks (T/S-Casks) for Interim Storage	
Reference Number	HSK-R-52	
Date Promulgated or Proclaimed	2003-07-01	Regulation

Name	R-13	
Title or Name	Free Release of Materials and Areas from Controlled Zones	
Reference Number	HSK-R-13	
Date Promulgated or Proclaimed	2002-02-01	Regulation

Name	GStSV	
Title or Name	Federal Ordinance on Fees in the Area of Radiation Protection	
Reference Number	814.56	
Date Promulgated or Proclaimed	1999-03-24	Law

Name	R-29	
Title or Name	Requirements for Interim Storage of Radioactive Waste	
Reference Number	HSK-R-29	
Date Promulgated or Proclaimed	2004-03-01	Regulation

MILESTONES

Country: Switzerland (Swiss Confederation) Reporting Year: 2005

Start Year or Reference Year:	1978	End Year	1978
Description of Milestone			
Concept report on geological disposal in Switzerland (Nagra)			

Start Year or Reference Year:	1982	End Year	1982
Description of Milestone			
End of OECD/NEA sea dumping activities for LILW in the Northern Atlantic Ocean.			

Start Year or Reference Year:	1985	End Year	1988
Description of Milestone			
"Project Gewaehr 85": Feasibility demonstration for disposal of all waste categories in Switzerland submitted by Nagra in 1985. Decision of Federal Government in June 1988: demonstration for EL-SMA accepted, for EL-HAA/LMA (crystalline host rock) safety concept and engineering feasibility accepted, but siting feasibility yet to be demonstrated.			

Start Year or Reference Year:	1988	End Year	2004
Description of Milestone			
ZWILAG: Planning, construction and commissioning of a central storage facility for spent fuel, HLW and any other type of waste, with conditioning facilities and plasma arc incinerator/melter.			

Start Year or Reference Year:	1990	End Year	1992
Description of Milestone			
Implementation of a standardized, decentralized computer-based database system for Swiss radioactive waste (ISRAM), which enables characterization and book-keeping for all conditioned and most of unconditioned waste packages.			

Start Year or Reference Year:	1993	End Year	1995
Description of Milestone			
EL-SMA: Wellenberg identified as candidate site after a 12 years' site evaluation procedure (1993), agreement with local community (1994), applications for general licence (federal) and mining concession (cantonal) for exploratory drift and repository in 1994, mining concession being rejected by public referendum in June 1995.			

Start Year or Reference Year:	1996	End Year	2003
Description of Milestone			
EL-SMA: Despite decisions on a stepwise concession approach (first only exploratory drift, then repository), project modifications (monitoring, retrievability) and definition of exclusion criteria: negative outcome of a new cantonal vote on mining concession for an exploratory drift in September 2002. Wellenberg site is abandonded by the potential operator company GNW, which is formally disbanded in 2003 after completion of recultivation and settlement of further obligations.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
EL-HAA/LMA: Completion of feasibility study (Project "Entsorgungsnachweis"), based on Opalinus clay host rock formation in Northern Switzerland (Zürcher Weinland). Report was submitted by Nagra to the Federal Government by end of 2002. At the same time, Nagra asked the Federal Government to agree to Nagra's proposal to focus future investigations for the Swiss SF/HLW/ILW programme on the Opalinus clay and the candidate siting area of the Zürcher Weinland. The decision by the Federal Government is expected in 2006.			

MILESTONES

Country: Switzerland (Swiss Confederation) | Reporting Year: 2005

Start Year or Reference Year:	2003	End Year	
Description of Milestone			
Follow-up of EL-SMA: Due to abandonment of the Wellenberg site, a progamme was launched by Nagra in 2003 for (a) re-evaluation of candidate host rocks/sites from scratch and (b) reconsideration of alternative repository concepts for SMA waste. Conclusions shall be reported in 2005 to the Federal Government, as requested for comprehensiveness in view of the decisions envisaged for 2006 concerning acceptance of the feasibility demonstration for EL-HAA/LMA.			

Country Waste Profile Report for Thailand

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:28:23

Waste Class Matrix(ces) Used/Defined

Country: Thailand, Kingdom of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: Thailand

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
VLLW	100	0	0
LILW-SL	100	0	0
LILW-LL	0	100	0
HLW	0	0	100

Description: Thailand does not have any HLW even though HLW is part of the classification scheme. The classification scheme is specified in the Science and Technology Ministerial Regulation.

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	X			
processed		X	X	X

Groups Overview

Country: Thailand, Kingdom of

Reporting Year: 2005

Reporting Group: **National**

Inventory Reporting Date: December 2005

Waste Matrix Used: Thailand

Description: In this reporting group, a single theoretical site is defined. The waste quantities reported are the totals for actual sites located around Thailand. See the comment regarding inventory reporting date.

Site Name	Facility Name	Facilities Defined		
All Sites	OAP-WPF	processing		
	OAP-SF1		storage	
	OAP-SF2		storage	
	OAP-SRS		storage	

Comment #408: VLLW

VLLW is generated but not released due to a lack of regulation regarding release. It is not segregated from LLW and therefore is reported in the NEWMDB as part of LILW-SL waste

Reporting Group National, Site Structure: All Sites

Country: Thailand, Kingdom of Reporting Year: 2005

Full Name:	A single theoretical site is defined to facilitate reporting to the NEWMDB. The waste quantities reported are the totals for actual sites located around Thailand, including those at the central facility located at the OAP, Bangkok.
Location:	various
License Holder(s) :	National Centralized Radioactive Waste Management Office of Atoms for Peaces(OAP)

The following list the waste management facilities that are located at this site.

Facility: OAP-WPF

Description	Waste Processing Facility at the Office for Atoms for Peace, Bankgok, liquid waste treatment plant (chemical precipitation) since 1965, incinerator (20 kg/day) since 1992, compactor since 1992.

Processing part of the "OAP-WPF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1965

Facility: OAP-SF1

Description	Storage Facility 1 at the OAP in Bangkok, for the storage of SRS which are conditioned and some are not conditioned.

Storage part of the "OAP-SF1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	No	No	LILW-SL	No	No
LILW-LL	No	No	HLW	No	No
SRS	Yes	No			
List SRS?	Yes				
Capacity	310 cubic metre				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
OAP-SF1	building	1996	No	No	No	Yes

Facility: OAP-SF2

Description	Storage Facility 2 at the OAP in Bangkok, capacity 292.5m3, for Radioisotope (RI) wastes which are already processed.

Storage part of the "OAP-SF2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	Yes	Yes	LILW-SL	Yes	Yes
LILW-LL	Yes	Yes	HLW	No	No
SRS	No	No			
List SRS?	No				

Capacity	292.5 cubicmetre, for the storage of the RI wastes, for the conditioned and non-conditioned waste-drums (200 litre).

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
OAP-SF2	building	1999	No	No	No	No

Facility: OAP-SRS

Description	for storage of the conditioned SRS at the OAP in Bangkok,

Storage part of the "OAP-SRS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
VLLW	No	No	LILW-SL	Yes	No
LILW-LL	Yes	No	HLW	No	No
SRS	Yes	No			
List SRS?	Yes				

Capacity	15 drums (200 litre) for conditioned Radiumand 2 stainless steel container for condtitioned Cobalt-60 (420 Ci) and the condtitioned Ra-226(4 Ci) irradiator.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SRS	cask	2001	No	No	No	Yes

Comment #7366: Conditioning of SRS under the support of IAEA

The first Radium-226 conditioning operation was performed under the support of the IAEA in year 2001. The total amount of Ra-226 was 4,823.6 mg(948 pieces). The second Radium-226 conditioning operation has been planned to operate in year 2004. For the conditioning of Co-60 source (420 ci) from the Radiological accident in Samutprakran province, Thailand in year 2000, was also supported by IAEA and successfully operated in year 2002.

Reporting Group National, Site Data: All Sites

Country: Thailand, Kingdom of Reporting Year: 2005

Full Name: A single theoretical site is defined to facilitate reporting to the NEWMDB. The waste quantities reported are the totals for actual sites located around Thailand, including those at the central facility located at the OAP, Bangkok.

Inventory Reporting Date: December 2005 Waste Matrix: Thailand

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in % RO	FF FE	RP	NA	DF	DC RE	ND	Est
VLLW	Storage OAP-SF2	No	5	0	0	0	100	0	0	0	No
VLLW	Storage OAP-SF2	Yes	80	5	0	0	95	0	0	0	No

Comment #6850: The additional characteristics of the waste

Most of processed solid waste came from the medical use, and universities. But the most of liquid waste came from the OAP research reactor and OAP laboratories.

Comment #7368: VLLW volume-reduction

Most VLLW solid wastes are generated by RI users.
Those VLLW are treated for volume reduction and then kept in 200 litre-drums at OAP-SF2. Now there are about 400 drums.

Class	Location Facility	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
LILW-SL	Storage OAP-SF2	No	5	50	0	0	50	0	0	0	No

Comment #6851: The additional characteristics of the waste

Unprocessed Waste are as follows:
1. Spent ion-exchange resin from the OAP Research Reactor, have been kept in 50 drums (50 litre), total about 2.5 cubic-metre
2. The iron-steel contaminated with Cs-137 from the Steel Factories, (products from the melting of scrap metal from East Europe), total volume about 2.5 cubic-metre

Waste Class	Status
LILW-LL (in Storage)	Waste data available, will not be reported.

Comment #6852: Current Status

There are TENORM waste, but they are exclused from Thai Atomic Engergy Act. Perhaps in the future, those TENORM waste may include in the inventory if the Regulator would have some guidance or regulations to control the TENORM wastes.

Processing - Treatment method(s)

Method	Status Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction			same	
Decontamination			same	
Evaporation	Yes			
Incineration			same	
Ion Exchange			same	
Size Reduction	Yes			

Processing - Conditioning method(s)

Method	Status Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Cementation			same	
Containerization			increase	
Encapsulation			increase	

Spent Sources <=30 years in storage Waste data available, will not be reported

Attachment #1196: SRS inventory (as of January 2004)

File name: SRS thailand.xls

File type: MS Office Document

Reporting Group National, Site Data: All Sites

Country: Thailand, Kingdom of Reporting Year: 2005

Spent Sources >30 years in storage Waste data available, will not be reported.

Attachment #1197: SRS inventory (as of January 2004)

File name: SRS thailand.xls

File type: MS Office Document

Multiple Nuclides Spent Sources in storage Waste data available, will not be reported

REGULATORS

Country: Thailand, Kingdom of

Reporting Year: 2005

Name	OAP
Full Name	Office of Atoms for Peace
Division	Bureau of Radiation Safety Regulation, Bureau of Nuclear Safety Regulation,
City or Town	Bangkok

Comment #6848: Wastes that are regulated by the Regulator

Matrix Thailand - HLW, LILW-LL, LILW-SL, VLLW
Note: At present, there is no HLW.

REGULATIONS / LAWS

Country: Thailand, Kingdom of Reporting Year: 2005

Name	AEPA 2504	
Title or Name	Atomic Energy for Peace Act, B.E 2504 (B.E = Buddishm Era) Ministerial Regulation on Waste Management B.E. 2546 (2003)	
Reference Number	Ministerial Regulation BE 2546 Art.1-13	
Date Promulgated or Proclaimed	2003-04-01	Regulation

Comment #6849: Wastes that are regulated by the Regulation

Matrix Thailand - HLW, LILW-LL, LILW-SL, VLLW

MILESTONES

Country: Thailand, Kingdom of Reporting Year: 2005

Start Year or Reference Year:	1989	End Year	2003
Description of Milestone			
The Thai cabinet had a resolution in 1989 to relocate the Nuclear Research Center, comprising the research reactor, waste management facility, isotope production facility and other nuclear facilities in OAEP to more appropriate and safe location due to it is located near the Bangkok airport. The Prequalified Bidding for the new nuclear research center was perfomed in 1995. The final Bidding was done in 1996. In 1997, the OAEP signed contract with General Atomics to design and establish the new Nuclear Research Center at Ongkarak district, Nakhonnayok Province, 60 km away from OAEP. In year 2003, the OAEP got the construction permit for the new Research reactor.			

Start Year or Reference Year:	2004	End Year	2006
Description of Milestone			
The construction of the Centralized Waste Processing and Storage Facilities at the new site, Ongkarak district, Nakhonnayok province has been delayed, due to the financial problem.			

Start Year or Reference Year:	2005	End Year	2007
Description of Milestone			
The Atomic Energy for Peace Act B.E.2504 is being revised to match the development of Nuclear Technology in the country.			

Country Waste Profile Report for

Turkey

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-04-12 10:29:26

Waste Class Matrix(ces) Used/Defined

Country: Turkey, Republic of Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Used

Description: The Agency's standard matrix

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Turkey, Republic of Reporting Year: 2005

Reporting Group: **CNAEM**

Inventory Reporting Date: December 2005

Waste Matrix Used: IAEA Def.

Description: Centralized Waste Processing and Storage Facility

Site Name	Facility Name	Facilities Defined		
CNAEM	Tre.&Cond.	processing		
	Storage		storage	

REGULATORS

Country: Turkey, Republic of Reporting Year: 2005

Name	Regulator
Full Name	Turkish Atomic Energy Authority
Division	
City or Town	Ankara

Comment #6710: Wastes that are regulated by the Regulator

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

REGULATIONS / LAWS

Country: Turkey, Republic of Reporting Year: 2005

Name	Reg1	
Title or Name	Turkish Atomic Energy Act	
Reference Number	Official Gazette 17753 and Turkish Law Number 2690	
Date Promulgated or Proclaimed	1982-07-13	Law

Comment #6711: Wastes that are regulated by the Law

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	Reg2	
Title or Name	Radiation Safety Charter(Radyasyon Guvenligi Tuzugu)	
Reference Number	Official Gazette 18861	
Date Promulgated or Proclaimed	1985-09-07	Regulation

Comment #6712: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	Reg3	
Title or Name	Radiation Safety Legislation (Radyasyon Güvenligi Yönetmeligi)	
Reference Number	Official Gazette 23999	
Date Promulgated or Proclaimed	2000-03-24	Regulation

Comment #6713: Wastes that are regulated by the Regulation

Matrix IAEA Def. - HLW, LILW-LL, LILW-SL

Name	Reg4	
Title or Name	Regulation on Waste arising from the use of Radioactive Materials (Radyoaktif Madde Kullanimindan Olusan Atiklara iliskin Yönetmelik)	
Reference Number	Official Gazette 25571	
Date Promulgated or Proclaimed	2004-09-02	Regulation

Name	Reg5	
Title or Name	Charter on Licensing Nuclear Facilities	
Reference Number		
Date Promulgated or Proclaimed	1983-12-19	Regulation

MILESTONES

Country: Turkey, Republic of Reporting Year: 2005

Start Year or Reference Year:	1989	End Year	

Description of Milestone
Waste management activities was started beginning from 1985, as a Technical Cooperation between Turkish Atomic Energy Authority (TAEK) and IAEA, a waste processing and interim storage facility was built up and has been operating since 1989 in Istanbul as a result of that successful project. Compaction, cementation and precipitation processes have been carried out. A series of beneficial regional Predisposal Waste Management Demonstration courses, aiming to the transfer of knowledge and information to the participants from developing countries, have been organized by TAEK and IAEA.

Policies

Country: Turkey, Republic of | Reporting Year: 2005

National Systems

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

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

	Requirements	(Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

	Responsibilities	(Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

	Member State Responsibility	
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
	Regulatory Body Responsibility	
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
	Waste Generator and Operators of Waste Management Facilities Responsibility	

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	No
117	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
	If the answer to the previous question is Yes, provide a brief description or reference documentation that describes previous clearance practices using the comments/attachments link below	

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All

Policies

42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - Some
44	Safety Assessment (SA)	Yes - All
46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	No

	Post-Closure	(Yes;No)
48	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	No

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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)	Yes
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	Yes

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

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

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

Policies

Country: Turkey, Republic of | **Processing/Storage** | Reporting Year: 2005

109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	No
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	Yes

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

Import-Export

Radioactive Waste	(Yes;No)

91	Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)?	Yes

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

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

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

Country Waste Profile Report for Ukraine

Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:28:48

Waste Class Matrix(ces) Used/Defined

Country: Ukraine Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: Ukraine

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Mid-Active	99	1	0
Low-Active	99	1	0
High-Active	0	0	100

Description: Low-Active Radioactive Waste
For alpha emitters:1E-1 - 1E+3 kBq/kg
For beta, gamma emitters:1E+1 - 1E+5 kBq/kg

Mid-Active Radioactive Waste
For alpha emitters: 1E+5 - 1E+8 kBq/kg
For beta, gamma emitters: 1E+3 - 1E+6 kBq/kg

High-Active Radioactive Waste
Thermal power above about 2 kW/m3

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: Ukraine Reporting Year: 2005

Reporting Group: **ChNPP**

Inventory Reporting Date: December 2005

Waste Matrix Used: Ukraine

Description: Reporting group ChNPP - Chornobyl NPP

Site Name	Facility Name	Facilities Defined		
Chorn NPP	SLRW		storage	
	SSRW		storage	

Reporting Group: **NNEC**

Inventory Reporting Date: December 2005

Waste Matrix Used: Ukraine

Description: Reporting group NNEC - National Nuclear Energy Generating Company, which include Khmelnitsky NPP, Rivne NPP, South-Ukraine NPP and Zaporizhzhya NPP

Site Name	Facility Name	Facilities Defined		
Khmel NPP	FROI	processing		
	SLRW		storage	
	SSRW		storage	
Rivne NPP	BF	processing		
	SLRW		storage	
	SSHRW1,2		storage	
	SSRW		storage	
SU NPP	SLRW		storage	
	SSRW		storage	
Zap NPP	IF	processing		
	PF	processing		
	SLRW		storage	
	SSRW		storage	

Groups Overview

Country: Ukraine Reporting Year: 2005

Reporting Group: **RADON**

Inventory Reporting Date: December 2005

Waste Matrix Used: Ukraine

Description: Reporting group RADON - State association "RADON", which include Dnipropetrovsk, Donetsk, Kiev, Kharkov, Lviv, Odessa Special enterprises and Special enterprise "Komplex"

Site Name	Facility Name	Facilities Defined		
Dnipr SE	Modul 4		storage	
	Modul 1			disposal
	Modul 2			disposal
	Modul 5			disposal
	SRS 1			disposal
Kh SE	FAC 1	processing		
	FAC 2	processing		
	Modul 21		storage	
	PIPE		storage	
	Modul 1-14			disposal
	Modul 18			disposal
	Modul 19			disposal
	Modul 20			disposal
	SRS 15-16			disposal
	SRS 17			disposal
Kiev SE	LRW		storage	
	Stor 1-3		storage	
	Modul 5-7			disposal
	Modul 8-10			disposal
	SRS 1-6			disposal
LvivSE	LRW		storage	
	Modul 4		storage	
	Modul 1			disposal
	Modul 2			disposal
	Modul 3			disposal
	Modul 5			disposal
	Modul 7			disposal
	Modul B			disposal
	SRS 1			disposal
	SRS 2			disposal
	SRS 3			disposal
Odessa SE	LRW		storage	
	Modul 1			disposal
	SRS 1			disposal
	SRS 2			disposal
SE Komplex	PTLRW		storage	
	PZRW			disposal
SE Tech	Vector			disposal

Reporting Group ChNPP, Site Structure: Chorn NPP

Country: Ukraine Reporting Year: 2005

Full Name: Chornobyl nuclear power plant

License Holder(s) : Chornobyl nuclear power plant
General Director: Gramotkin Igor
Tel: +38 04493 4 33 50
Fax: +38 04479 2 63 59

The following list the waste management facilities that are located at this site.

Facility: SLRW

Description	Tanks for liquid radioactive waste storage

Storage part of the "SLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SLRW1	tank (stainless steel)	1977	No	No	Yes	No
SLRW2	tank (stainless steel)	1982	No	No	Yes	No

Facility: SSRW

Description	Building for solid radioactive waste storage

Storage part of the "SSRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSRW	building	1978	No	No	Yes	No

Reporting Group ChNPP, Site Data: Chorn NPP

Country: Ukraine Reporting Year: 2005

Full Name: Chornobyl nuclear power plant

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	19853	92	0	0	0	0	8	0	No
Comment #6835: The additional characteristics of the waste Unprocessed: flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											
Low-Active	Storage	No	1174	99	0	0	0	0	1	0	No
Comment #6836: The additional characteristics of the waste Unprocessed: flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											
High-Active	Storage	No	507	98	0	0	0	0	2	0	No
Comment #6837: The additional characteristics of the waste Unprocessed: flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											

Reporting Group NNEC, Site Structure: Khmel NPP

Country: Ukraine Reporting Year: 2005

Full Name: Khmelnitsky nuclear power plant

License Holder(s) : National nuclear energy generating company
President: Nedashkovski Yury
Tel: +38 044 294 48 70
Fax: +38 044 294 48 83
Director: Panaschenko Mykola
Tel: +38 03848 3 33 50
Fax: +38 03848 3 33 60

The following list the waste management facilities that are located at this site.

Facility: FROI

Description	Facility for radioactive oil incineration

Processing part of the "FROI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	2001

Facility: SLRW

Description	Tanks for liquid radioactive waste storage

Storage part of the "SLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SLRW	tank (stainless steel)	1987	No	No	Yes	No

Reporting Group NNEC, Site Structure: Khmel NPP

Country: Ukraine Reporting Year: 2005

Facility: SSRW

Description	Moduls for solid radioactive waste storage

Storage part of the "SSRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSRW-1	building	1987	No	No	Yes	No
SSRW-2	building	2002	No	No	Yes	No

Reporting Group NNEC, Site Data: Khmel NPP

Country: Ukraine Reporting Year: 2005

Full Name: Khmelnitsky nuclear power plant

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	682	100	0	0	0	0	0	0	No
Mid-Active	Storage	Yes	671	100	0	0	0	0	0	0	No

Comment #6826: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)
Processed: liquid (organic)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
Low-Active	Storage	No	3225	100	0	0	0	0	0	0	No

Comment #6827: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
High-Active	Storage	No	8	100	0	0	0	0	0	0	No

Comment #6828: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Evaporation			same	

Reporting Group NNEC, Site Structure: Rivne NPP

Country: Ukraine Reporting Year: 2005

Full Name: Rivne nuclear power plant

License Holder(s) :
National nuclear energy generating company
President: Nedashkovski Yury
Tel: +38 044 294 48 70
Fax: +38 044 294 48 83
Director: Fridman Mykola
Tel: +38 03636 2 23 14
Fax: +38 03636 2 23 60

The following list the waste management facilities that are located at this site.

Facility: BF

Description	Facility for radioactive waste bituminization

Processing part of the "BF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	2001

Facility: SLRW

Description	Tanks for liquid radioactive waste storage

Storage part of the "SLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SLRW1	tank (stainless steel)	1980	No	No	Yes	No
SLRW2	tank (stainless steel)	1986	No	No	Yes	No

Reporting Group NNEC, Site Structure: Rivne NPP

Country: Ukraine | Reporting Year: 2005

Facility: SSHRW1,2

Description	Modul for solid high-radioactive waste storage

Storage part of the "SSHRW1,2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSHRW1,2	building	1980	No	No	Yes	No

Facility: SSRW

Description	Moduls for solid radioactive waste storage

Storage part of the "SSRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSRW1,2	building	1980	No	No	Yes	No
SSRW3	building	1986	No	No	Yes	No
SSRW4	building	2001	No	No	Yes	No

Reporting Group NNEC, Site Data: Rivne NPP

Country: Ukraine Reporting Year: 2005

Full Name: Rivne nuclear power plant

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	6633	100	0	0	0	0	0	0	No
Mid-Active	Storage	Yes	337	100	0	0	0	0	0	0	No

Comment #6829: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible), toxic
Processed: liquid (aqueous), liquid (organic)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
Low-Active	Storage	No	4970	100	0	0	0	0	0	0	No

Comment #6830: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible), toxic

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
High-Active	Storage	No	44	100	0	0	0	0	0	0	No
High-Active	Storage	Yes	2	100	0	0	0	0	0	0	No

Comment #6831: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible), toxic

Processing - Conditioning method(s)

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

Reporting Group NNEC, Site Structure: SU NPP

Country: Ukraine | Reporting Year: 2005

Full Name: South-Ukraine nuclear power plant

License Holder(s) :
National nuclear energy generating company
President: Nedashkovski Yury
Tel: +38 044 294 48 70
Fax: +38 044 294 48 83
Director: Bilyk Boris
Tel: +38 044 227 26 61
Fax: +38 05136 2 18 32

The following list the waste management facilities that are located at this site.

Facility: SLRW

Description	Tanks for liquid radioactive waste

Storage part of the "SLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SLRW1	tank (stainless steel)	1982	No	No	Yes	No
SLRW2	tank (stainless steel)	1986	No	No	Yes	No
SLRW3	tank (stainless steel)	1989	No	No	Yes	No

Facility: SSRW

Description	Building for solid radioactive waste storage

Storage part of the "SSRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSRW1	building	1982	No	No	Yes	No
SSRW2	building	1997	No	No	Yes	No
SSLLRW	building	1982	No	No	Yes	No
SSRW3	building	2002	No	No	Yes	No

Reporting Group NNEC, Site Data: SU NPP

Country: Ukraine Reporting Year: 2005

Full Name: South-Ukraine nuclear power plant

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	3500	100	0	0	0	0	0	0	No
Comment #6832: The additional characteristics of the waste Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											
Low-Active	Storage	No	15493	100	0	0	0	0	0	0	No
Comment #6833: The additional characteristics of the waste Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											
High-Active	Storage	No	12	100	0	0	0	0	0	0	No
Comment #6834: The additional characteristics of the waste Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)											

Reporting Group NNEC, Site Structure: Zap NPP

Country: Ukraine Reporting Year: 2005

Full Name: Zaporizhzhya Nuclear Power Plant

License Holder(s) :
National nuclear energy generating company
President: Nedashkovski Yury
Tel: +38 044 294 48 70
Fax: +38 044 294 48 83
Director: Tischenko Vyacheslav
Tel.: +38 06139 3 38 78
Fax: +38 06139 3 19 12

The following list the waste management facilities that are located at this site.

Facility: IF

Description	Incineration facility

Processing part of the "IF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1990

Facility: PF

Description	Pressing facility

Processing part of the "PF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1991

Reporting Group NNEC, Site Structure: Zap NPP

Country: Ukraine Reporting Year: 2005

Facility: SLRW

Description	Tanks for liquid radioactive waste

Storage part of the "SLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SLRW1	tank (stainless steel)	1984	No	No	Yes	No
SLRW2	tank (stainless steel)	1989	No	No	Yes	No

Facility: SSRW

Description	Building for solid radioactive waste storage

Storage part of the "SSRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	Yes	Yes
High-Active	Yes	Yes			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
SSRW1	building	1984	No	No	Yes	No
SSRW2	building	1989	No	No	Yes	No
SSRW3	building	1986	No	No	No	No

Reporting Group NNEC, Site Data: Zap NPP

Country: Ukraine Reporting Year: 2005

Full Name: Zaporizhzhya Nuclear Power Plant

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	2536	100	0	0	0	0	0	0	No
Mid-Active	Storage	Yes	4720	100	0	0	0	0	0	0	No

Comment #6823: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)
Processed: flammable, liquid (aqueous), liquid (organic)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
Low-Active	Storage	No	5636	100	0	0	0	0	0	0	No
Low-Active	Storage	Yes	524	100	0	0	0	0	0	0	No

Comment #6824: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)
Processed: flammable, liquid (aqueous), liquid (organic)

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
High-Active	Storage	No	78	100	0	0	0	0	0	0	No

Comment #6825: The additional characteristics of the waste

Unprocessed: explosive, flammable, hazardous (chemical), liquid (aqueous), liquid (organic), resin, sludge, solid (dispersible), solid (non-dispersible)

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Evaporation			same	
Incineration			same	

Reporting Group RADON, Site Structure: Dnipr SE

Country: Ukraine | Reporting Year: 2005

Full Name: Dnipropetrovsk State Interregion Special Enterprise

License Holder(s) : Dnipropetrovsk State Interreginal Special Enterprise,
Director: Svidersky Viktor,
Fax: +38 0562 93 07 33

The following list the waste management facilities that are located at this site.

Facility: Modul 4

Description	Storage for liquid radioactive waste

Storage part of the "Modul 4" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Modul 4	cask	1961	No	No	No	No

Facility: Modul 1

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2005	2008
EVENT: operation suspended		1981	

Reporting Group RADON, Site Structure: Dnipr SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 2

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1983	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2005	2008

Facility: Modul 5

Description	Concrete modules for solid biological radioactive waste

Disposal part of the "Modul 5" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	50	Capacity -planned (m3)	50
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1983	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2005	2008

Reporting Group RADON, Site Structure: Dnipr SE

Country: Ukraine Reporting Year: 2005

Facility: SRS 1

Description	SRS Modul

Disposal part of the "SRS 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	Yes				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2005	2008

Reporting Group RADON, Site Data: Dnipr SE

Country: Ukraine Reporting Year: 2005

Full Name: Dnipropetrovsk State Interregion Special Enterprise

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	60	0	0	0	100	0	0	0	No
Comment #6803: The additional characteristics of the waste Unprocessed: liquid (aqueous)											
Mid-Active	Disposal	No	435	0	0	0	100	0	0	0	No
Comment #6804: The additional characteristics of the waste Unprocessed: biohazardous, flammable, resin, solid (dispersible), solid (non-dispersible)											

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Zn-65	3			No	Yes	3	5.20E-05	
	5.20E-05							
Y-88	1			No	Yes	3	1.10E-05	
	1.10E-05							
Sr-90	85			No	Yes	3	5.75E+00	
	5.75E+00							
Sn-113	1			No	Yes	3	1.84E-05	
	1.84E-05							
Pm-147	25			No	Yes	3	1.01E-02	
	1.01E-02							
Na-22	1			No	Yes	3	5.95E-05	
	5.95E-05							
Mn-54	1			No	Yes	3	4.74E-04	
	4.74E-04							
Hg-203	1			No	Yes	3	9.75E-06	
	9.75E-06							
H-3	1			No	Yes	3	1.01E-01	
	1.01E-01							
Fe-55	2			No	Yes	3	1.15E-02	
	1.15E-02							
Cs-137		119		No	Yes	3	7.50E+03	
		7.50E+03						
Cs-137	97			No	Yes	3	6.99E+01	
	6.99E+01							
Co-60	39			No	Yes	3	1.08E+01	
	1.08E+01							
Co-57	10			No	Yes	3	8.40E-03	
	8.40E-03							
Se-75	2			No	Yes	3	1.36E-02	
	1.36E-02							
Pm-147	44	2		No	Yes	3	5.19E+01	
	2.96E-02	5.19E+01						

Reporting Group RADON, Site Data: Dnipr SE

Country: Ukraine Reporting Year: 2005

P-32	13			No	Yes	3	1.21E+01	
	1.21E+01							
Na-22	1			No	Yes	3	3.55E-09	
	3.55E-09							
Ir-192	6			No	Yes	3	5.50E+00	
	5.50E+00							
Fe-55	4			No	Yes	3	3.32E-01	
	3.32E-01							
Co-60	207			No	Yes	3	4.39E+00	
	4.39E+00							
Cd-109	2			No	Yes	3	2.12E-04	
	2.12E-04							
Sr-90	8352			No	Yes	3	4.38E+01	
	4.38E+01							
Kr-85		2		No	Yes	3	9.80E+00	
		9.80E+00						
Ir-192		8		No	Yes	3	1.69E+04	
		1.69E+04						
H-3	169			No	Yes	3	3.40E+02	
	3.40E+02							
Cf-252		2		No	Yes	3	2.40E+04	
		2.40E+04						
Se-75	2			No	Yes	3	3.47E+00	
	3.47E+00							
Zn-65	8			No	Yes	3	9.24E-04	
	9.24E-04							
Y-88	12			No	Yes	3	1.43E-03	
	1.43E-03							
Tl-204	48			No	Yes	3	2.98E+00	
	2.98E+00							
Th-228	1			No	Yes	3	7.40E-01	
	7.40E-01							
Sn-113	10			No	Yes	3	1.37E-03	
	1.37E-03							
Pm-147	306	3		No	Yes	3	1.64E+03	
	1.50E+00	1.64E+03						
P-32	12			No	Yes	3	2.55E-01	
	2.55E-01							
Na-22	7			No	Yes	3	6.66E-04	
	6.66E-04							
Mn-54	9			No	Yes	3	1.05E-03	
	1.05E-03							
Hg-203	14			No	Yes	3	5.01E+00	
	5.01E+00							
Fe-55	6			No	Yes	3	1.01E+01	
	1.01E+01							
Cs-137	510	1055		No	Yes	3	7.06E+04	
	4.52E+02	7.01E+04						
Co-60	1239	19		No	Yes	3	7.26E+04	
	1.67E+01	7.26E+04						
Co-57	41	2		No	Yes	3	1.66E+01	
	5.90E+00	1.07E+01						

Reporting Group RADON, Site Data: Dnipr SE

Country: Ukraine Reporting Year: 2005

Ce-139	10			No	Yes	3	1.30E-03	
	1.30E-03							
Cd-109	9			No	Yes	3	3.37E+00	
	3.37E+00							
Tl-204	53			No	Yes	3	7.80E+00	
	7.80E+00							
Sr-90	559			No	Yes	3	1.10E+03	
	1.10E+03							
Pm-147		310		No	Yes	3	1.90E+03	
		1.90E+03						
Ir-192		122		No	Yes	3	7.00E+03	
		7.00E+03						
H-3	1118			No	Yes	3	2.30E+03	
	2.30E+03							
Cs-137		4993		No	Yes	3	2.80E+05	
		2.80E+05						
Co-60		695		No	Yes	3	4.60E+04	
		4.60E+04						

Spent Sources >30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226	6		No	Yes	3	1.80E+00	
	1.80E+00						
Pu-239	5708		No	Yes	3	1.91E+01	
	1.91E+01						
Pu-238	1		No	Yes	3	1.13E+00	
	1.13E+00						
Ni-63	51		No	Yes	3	1.53E+00	
	1.53E+00						
Am-241		6	No	Yes	3	2.10E+01	
		2.10E+01					
Am-241	262		No	Yes	3	4.24E-01	
	4.24E-01						
U-235	1		No	Yes	3	1.02E-03	
	1.02E-03						
Ra-226	4		No	Yes	3	4.84E-02	
	4.84E-02						
Pu-239	1700		No	Yes	3	5.37E+01	
	5.37E+01						
Pu-238		6	No	Yes	3	1.23E+01	
		1.23E+01					
Pu-238	1		No	Yes	3	3.56E-07	
	3.56E-07						
Ni-63	8		No	Yes	3	2.95E-02	
	2.95E-02						
Am-241		52	No	Yes	3	6.69E+02	
		6.69E+02					

Reporting Group RADON, Site Data: Dnipr SE

Country: Ukraine Reporting Year: 2005

Pu-238		2	No	Yes	3	7.40E+01	
		7.40E+01					
U-233	1		No	Yes	3	8.36E-06	
	8.36E-06						
U-238	7		No	Yes	3	1.59E-05	
	1.59E-05						
U-234	5		No	Yes	3	8.30E-07	
	8.30E-07						
Th-232	1		No	Yes	3	9.04E-01	
	9.04E-01						
Ra-226	32		No	Yes	3	1.07E+00	
	1.07E+00						
Pu-239	20872	196	No	Yes	3	1.75E+03	
	9.80E+00	1.74E+03					
Pu-238	14		No	Yes	3	3.57E+00	
	3.57E+00						
Ni-63	82		No	Yes	3	7.40E-03	
	7.40E-03						
C-14	125		No	Yes	3	1.80E-02	
	1.80E-02						
Am-241	690		No	Yes	3	4.52E+02	
	4.52E+02						
Be-10		103	No	Yes	3	1.10E+03	
		1.10E+03					
Ra-226	52		No	Yes	3	1.70E+00	
	1.70E+00						
Pu-239	26848		No	Yes	3	3.50E+03	
	3.50E+03						
Am-241		199	No	Yes	3	1.50E+03	
		1.50E+03					

Multiple Nuclides Spent Sources in disposal

Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	2.180E-05	No	Yes	3	
Pu-238	1.090E-05				
Pu-239	1.090E-05				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	2.075E-05	No	Yes	3	
Pu-238	1.035E-05				
Pu-239	1.035E-05				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	1.800E-05	No	Yes	3	
Pu-238	9.000E-06				
Pu-239	9.000E-06				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	1.880E-05	No	Yes	3	
Pu-238	9.400E-06				
Pu-239	9.400E-06				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	1.890E-05	No	Yes	3	
Pu-238	9.450E-06				
Pu-239	9.450E-06				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	2.000E-05	No	Yes	3	

Pu-238	1.000E-05				
Pu-239	1.000E-05				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	2.000E-05	No	Yes	3	
Pu-238	1.000E-05				
Pu-239	1.000E-05				
Nuclide	Activity of Radionuclide (GBq)	cond.	uncond.	category.	Decay Date
U-233	1.900E-05	No	Yes	3	
Pu-238	9.500E-06				
Pu-239	9.500E-06				

Reporting Group RADON, Site Structure: Kh SE

Country: Ukraine Reporting Year: 2005

Full Name: Kharkov State Interregional Special Enterprise

License Holder(s) : Kharkov State Interregional Special Enterprise
Director: Sharov Volodymyr
Fax: +38 0572 94 34 80

The following list the waste management facilities that are located at this site.

Facility: FAC 1

Description	Facility for liquid radioactive waste cementation

Processing part of the "FAC 1" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1993

Facility: FAC 2

Description	Facility for liquid radioactive waste cementation

Processing part of the "FAC 2" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1995

Reporting Group RADON, Site Structure: Kh SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 21

Description	Cask for liquid radioactive waste

Storage part of the "Modul 21" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Modul 21	cask	1961	No	No	No	No

Facility: PIPE

Description	Storage for radioactive contaminated pipes

Storage part of the "PIPE" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
PIPE	building	1997	No	No	No	No

Reporting Group RADON, Site Structure: Kh SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 1-14

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 1-14" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	1200	Capacity -planned (m3)	1500
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1990	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008

Facility: Modul 18

Description	Concrete module for biological radioactive waste

Disposal part of the "Modul 18" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	30	Capacity -planned (m3)	60
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1968	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008
EVENT: operation suspended		1991	

Reporting Group RADON, Site Structure: Kh SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 19

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 19" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	400	Capacity -planned (m3)	400
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008
EVENT: operation suspended		1996	

Facility: Modul 20

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 20" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	400	Capacity -planned (m3)	400
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1968	
Additional Activities and Events			
ACTIVITY: upgrading		1997	1998
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008
EVENT: operation suspended		1991	

Reporting Group RADON, Site Structure: Kh SE

Country: Ukraine Reporting Year: 2005

Facility: SRS 15-16

Description	Modules for Spent Radioactive Sources are operating

Disposal part of the "SRS 15-16" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1990	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008

Facility: SRS 17

Description	Modul for Spent Radioactive Sources are not operating

Disposal part of the "SRS 17" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	Yes				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1961	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2008
EVENT: operation suspended		1991	

Reporting Group RADON, Site Data: Kh SE

Country: Ukraine Reporting Year: 2005

Full Name: Kharkov State Interregional Special Enterprise

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	448	0	0	0	100	0	0	0	No
Comment #6808: The additional characteristics of the waste Unprocessed: liquid (aqueous), solid (non-dispersible) Processed: solid (non-dispersible)											
Mid-Active	Disposal	No	552	0	0	0	100	0	0	0	No
Mid-Active	Disposal	Yes	860	0	0	0	100	0	0	0	No
Comment #6809: The additional characteristics of the waste Unprocessed: flammable, resin, sludge, solid (dispersible), solid (non-dispersible) Processed: biohazardous, solid (dispersible), solid (non-dispersible)											

Processing - Conditioning method(s)

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

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-90	100			No	Yes	3	2.49E+01	
	2.49E+01							
Ir-192	1			No	Yes	2	2.32E+00	
	2.32E+00							
Cs-137	92	179		No	Yes	3	1.09E+04	
	1.41E+01	1.09E+04						
Co-60	3			No	Yes	3	5.71E+00	
	5.71E+00							
Co-60	1			No	Yes	3	2.61E-03	
	2.61E-03							
Sr-90		1		No	Yes	3	3.20E+01	
		3.20E+01						
Sr-90	165			No	Yes	3	5.32E+01	
	5.32E+01							
Tm-170	1			No	Yes	3	1.00E-04	
	1.00E-04							
Pm-147	21			No	Yes	3	1.00E-04	
	1.00E-04							
Na-22	1			No	Yes	3	1.00E-04	
	1.00E-04							
Ir-192	3			No	Yes	3	8.82E+00	
	8.82E+00							
Fe-55	2			No	Yes	3	2.31E-02	
	2.31E-02							

Reporting Group RADON, Site Data: Kh SE

Country: Ukraine Reporting Year: 2005

Cs-137		111		No	Yes	3	5.94E+03	
		5.94E+03						
Cs-137	78			No	Yes	3	2.02E+01	
	2.02E+01							
Co-60	1			No	Yes	3	1.67E-02	
	1.67E-02							
Co-60	75			No	Yes	3	1.81E-02	
	1.81E-02							
Co-57	2			No	Yes	3	1.00E-04	
	1.00E-04							
Co-56	1			No	Yes	3	1.00E-04	
	1.00E-04							
Ce-139	1			No	Yes	3	1.00E-04	
	1.00E-04							
Zn-65	79			No	Yes	3	1.41E-03	
	1.41E-03							
Tm-170	2			No	Yes	3	1.00E-07	
	1.00E-07							
Tl-204	1			No	Yes	3	4.57E-09	
	4.57E-09							
Sr-90	6456	3		No	Yes	3	2.12E+02	
	1.33E+02	7.87E+01						
Sn-119m	1			No	Yes	3	1.50E-06	
	1.50E-06							
Pm-147	10			No	Yes	3	1.27E-06	
	1.27E-06							
Na-22	3			No	Yes	3	5.36E-06	
	5.36E-06							
Mn-54	5			No	Yes	3	2.89E-08	
	2.89E-08							
Ir-192	12			No	Yes	3	8.82E-02	
	8.82E-02							
I-131	1			No	Yes	3	1.00E+00	
	1.00E+00							
Hg-203	5			No	Yes	3	1.00E+00	
	1.00E+00							
H-3	376			No	Yes	3	1.81E+02	
	1.81E+02							
H-3	43			No	Yes	3	9.79E-02	
	9.79E-02							
Fe-59	8			No	Yes	3	1.00E-07	
	1.00E-07							
Fe-55	2			No	Yes	3	3.40E-03	
	3.40E-03							
Cs-137	261	376		No	Yes	3	2.40E+04	
	1.29E+02	2.39E+04						
Co-60	424	3		No	Yes	3	1.16E+02	
	6.35E+00	1.10E+02						
Co-58	31			No	Yes	3	1.00E-07	
	1.00E-07							
Co-56	17			No	Yes	3	1.96E-04	
	1.96E-04							

Reporting Group RADON, Site Data: Kh SE

Country: Ukraine Reporting Year: 2005

Co-56	25			No	Yes	3	1.00E-07	
	1.00E-07							
Cf-252	1			No	Yes	3	8.19E-06	
	8.19E-06							
Tm-170	21			No	Yes	3	4.00E-02	
	4.00E-02							
Tl-204	4			No	Yes	3	2.10E+00	
	2.10E+00							
Tl-204	9			No	Yes	3	3.10E+00	
	3.10E+00							
Sr-90		20		No	Yes	3	1.60E+02	
		1.60E+02						
Sr-90	1837			No	Yes	3	3.00E+02	
	3.00E+02							
Sn-119m	3			No	Yes	3	8.10E-05	
	8.10E-05							
Sn-113	24			No	Yes	3	2.80E-08	
	2.80E-08							
Ru-106	1			No	Yes	3	8.00E-05	
	8.00E-05							
Po-210	130			No	Yes	3	3.80E-02	
	3.80E-02							
Pm-147	42	10		No	Yes	3	3.60E+02	
	1.80E-01	3.60E+02						
Na-22	14			No	Yes	3	5.30E-05	
	5.30E-05							
Mn-54	13			No	Yes	3	2.70E-07	
	2.70E-07							
Kr-85	1			No	Yes	3	2.30E+00	
	2.30E+00							
Ir-192	221			No	Yes	3	4.40E-01	
	4.40E-01							
I-125	2			No	Yes	3	2.60E-06	
	2.60E-06							
H-3		38		No	Yes	3	3.10E+04	
		3.10E+04						
Fe-55	15			No	Yes	3	2.00E+00	
	2.00E+00							
Eu-152		1		No	Yes	3	2.30E+01	
		2.30E+01						
Cs-137	568	1493		No	Yes	3	7.83E+04	
	2.70E+02	7.80E+04						
Co-60	1091	64		No	Yes	3	2.83E+02	
	2.30E+01	2.60E+02						
Co-57	26			No	Yes	3	1.90E-04	
	1.90E-04							
Cd-109	22			No	Yes	3	3.80E-02	
	3.80E-02							
Cf-252	16	1		No	Yes	3	1.70E+01	
	5.30E-03	1.70E+01						

Spent Sources >30 years in disposal

Reporting Group RADON, Site Data: Kh SE

Country: Ukraine Reporting Year: 2005

Nuclide	Number of Sources/Total Activity of Sources (GBq) Group I less than or equal 4GBq num./activity	Group II more than 4GBq but less than or equal 4E+4GBq num./activity	cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
Pu-239	10098		No	Yes	3	3.16E+02	
	3.16E+02						
Am-241	82		No	Yes	3	2.71E+00	
	2.71E+00						
U-238	2		No	Yes	3	1.15E-06	
	1.15E-06						
Th-232	1		No	Yes	3	2.00E-05	
	2.00E-05						
Ra-226	5		No	Yes	3	3.59E-06	
	3.59E-06						
Pu-239		1	No	Yes	2	1.59E+02	
		1.59E+02					
Pu-239	9453		No	Yes	3	1.31E+01	
	1.31E+01						
Pu-238	2715		No	Yes	3	3.08E+00	
	3.08E+00						
Ni-63	10		No	Yes	3	8.11E+00	
	8.11E+00						
C-14	6		No	Yes	3	7.77E-02	
	7.77E-02						
Am-241	5	1	No	Yes	2	7.30E+01	
	4.79E+00	6.82E+01					
U-238	26		No	Yes	3	1.30E-03	
	1.30E-03						
Th-232	2		No	Yes	3	1.90E-02	
	1.90E-02						
Ra-226	978		No	Yes	3	1.90E-01	
	1.90E-01						
Pu-239		8	No	Yes	3	1.00E+02	
		1.00E+02					
Pu-239	18923		No	Yes	3	3.60E+02	
	3.60E+02						
Pu-238		78	No	Yes	3	8.00E+03	
		8.00E+03					
Pu-238	1553		No	Yes	3	9.10E+02	
	9.10E+02						
Ni-63	14		No	Yes	3	8.80E+00	
	8.80E+00						
C-14	5		No	Yes	3	3.70E-01	
	3.70E-01						
Am-243		1	No	Yes	2	1.50E+03	
		1.50E+03					
Am-241		75	No	Yes	2	1.10E+03	
		1.10E+03					
Am-241	160		No	Yes	3	9.80E+01	
	9.80E+01						

Reporting Group RADON, Site Structure: Kiev SE

Country: Ukraine Reporting Year: 2005

Full Name: Kiev State Interregional Special Enterprise

License Holder(s) : Kiev State Interregional Special Enterprise
Director: Andrievsky Volodymyr
Fax: +38 044 266 74 77

The following list the waste management facilities that are located at this site.

Facility: LRW

Description	Casks for liquid radioactive waste

Storage part of the "LRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Modul 12	cask	1962	No	No	No	No
Modul 13	cask	1962	No	No	No	No
Modul 14	cask	1962	No	No	No	No
Modul 15	cask	1986	No	No	No	No
Modul 16	cask	1986	No	No	No	No

Facility: Stor 1-3

Description	Building for storage solid radioactive waste in containers

Storage part of the "Stor 1-3" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	Yes	No			
List SRS?	Yes				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Stor 1	building	1995	No	No	No	Yes
Stor 2	building	1995	No	No	No	Yes
Stor 3	building	1995	No	No	No	Yes

Reporting Group RADON, Site Structure: Kiev SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 5-7

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 5-7" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1200	Capacity -planned (m3)	1200
Depth (m)	4		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
operation		1975	
Additional Activities and Events			
ACTIVITY: upgrading		1997	1997
EVENT: operating license granted		1996	1999
EVENT: operating license granted		1999	2002
EVENT: operating license granted		2002	2005
EVENT: operating license granted		2005	2008
EVENT: operating license revoked		1996	1997
EVENT: operating license re-instated		1997	1997
EVENT: operation suspended		1989	

Reporting Group RADON, Site Structure: Kiev SE

Country: Ukraine Reporting Year: 2005

Facility: Modul 8-10

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 8-10" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	600	Capacity -planned (m3)	600
Depth (m)	4		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1996	1999
EVENT: operating license granted		1999	2002
EVENT: operating license granted		2002	2005
EVENT: operating license granted		2005	2008
EVENT: operating license revoked		1996	1997
EVENT: operating license re-instated		1997	1997
EVENT: operation suspended		1975	

Reporting Group RADON, Site Structure: Kiev SE

Country: Ukraine Reporting Year: 2005

Facility: SRS 1-6

Description	Moduls for spent radioactive sources disposal

Disposal part of the "SRS 1-6" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	Yes				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1996	1999
EVENT: operating license granted		1999	2002
EVENT: operating license granted		2002	2005
EVENT: operating license granted		2005	2008
EVENT: operation suspended		1996	

Reporting Group RADON, Site Data: Kiev SE

Country: Ukraine | Reporting Year: 2005

Full Name: Kiev State Interregional Special Enterprise

Inventory Reporting Date: December 2005 | Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	566	0	0	0	99	0	1	0	No
Comment #6793: The additional characteristics of the waste Unprocessed: liquid (aqueous), solid (non-dispersible)											
Mid-Active	Disposal	No	1800	0	0	0	99	1	0	0	No
Comment #6794: The additional characteristics of the waste Unprocessed: biohazardous, flammable, resin, solid (dispersible), solid (non-dispersible)											

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Tl-204	10			No	Yes	3	1.07E-03	
	1.07E-03							
Th-228	3			No	Yes	3	1.81E-07	
	1.81E-07							
Tm-170	7			No	Yes	3	7.92E+00	
	7.92E+00							
Eu-152	5			No	Yes	3	1.30E-04	
	1.30E-04							
Na-22	10			No	Yes	3	5.64E-06	
	5.64E-06							
Mn-54	17			No	Yes	3	3.33E-07	
	3.33E-07							
Ba-133	6			No	Yes	3	1.46E-06	
	1.46E-06							
Ir-192	6			No	Yes	3	4.04E-06	
	4.04E-06							
Pm-147	3			No	Yes	3	7.95E+00	
	7.95E+00							
Cs-137		40		No	Yes	2	3.74E+03	
		3.74E+03						
Cs-137	98			No	Yes	3	8.40E+01	
	8.40E+01							
Cd-109	10			No	Yes	3	1.51E-05	
	1.51E-05							
Sr-90		17		No	Yes	3	2.97E+03	
		2.97E+03						
Sr-90		737		No	Yes	3	3.82E+03	
		3.82E+03						
Kr-85		1		No	Yes	3	8.45E+00	
		8.45E+00						
Kr-85	5			No	Yes	3	1.22E+00	
	1.22E+00							

Reporting Group RADON, Site Data: Kiev SE

Country: Ukraine Reporting Year: 2005

Ce-139	11			No	Yes	3	4.26E-04	
	4.26E-04							
Co-60	49			No	Yes	3	3.91E+01	
	3.91E+01							
Co-57		45		No	Yes	3	5.76E+02	
		5.76E+02						
Fe-55	46			No	Yes	3	3.84E+00	
	3.84E+00							
H-3		30		No	Yes	3	2.46E+03	
		2.46E+03						
H-3	19			No	Yes	3	4.05E+01	
	4.05E+01							
Sr-85	1			No	Yes	2	9.66E-03	
	9.66E-03							
Po-210	32			No	Yes	3	1.43E-03	
	1.43E-03							
Sr-90	23			No	Yes	3	9.50E+00	
	9.50E+00							
Ce-144	2			No	Yes	3	2.29E-07	
	2.29E-07							
Na-22	27			No	Yes	3	1.11E-01	
	1.11E-01							
Cf-252	60			No	Yes	2	7.65E-04	
	7.65E-04							
Mn-54	9			No	Yes	3	9.17E-04	
	9.17E-04							
Tm-170		7		No	Yes	2	4.43E+02	
		4.43E+02						
Th-228	7			No	Yes	3	6.13E-07	
	6.13E-07							
Tl-204	71			No	Yes	2	1.80E+01	
	1.80E+01							
Ir-192	570			No	Yes	2	3.67E-01	
	3.67E-01							
Eu-152	3			No	Yes	2	2.52E-05	
	2.52E-05							
Pm-147	28	4		No	Yes	3	2.11E+01	
	4.01E+00	1.71E+01						
Cs-137	928	1564		No	Yes	3	1.08E+05	
	1.34E+03	1.07E+05						
Ba-133	5			No	Yes	3	5.51E-05	
	5.51E-05							
Cd-109	20			No	Yes	3	1.36E-01	
	1.36E-01							
Sr-90	1273	16		No	Yes	3	9.73E+02	
	3.33E+02	6.40E+02						
Kr-85	37	27		No	Yes	3	2.17E+02	
	2.01E+01	1.97E+02						
Se-75	5			No	Yes	3	8.95E-08	
	8.95E-08							
Zn-65	23			No	Yes	3	5.05E-09	
	5.05E-09							

Reporting Group RADON, Site Data: Kiev SE

Country: Ukraine Reporting Year: 2005

Co-60	980	653		No	Yes	3	1.62E+05	
	6.69E+02	1.61E+05						
Co-57	86			No	Yes	3	2.86E-03	
	2.86E-03							
Fe-55	22			No	Yes	2	6.89E-01	
	6.89E-01							
Na-22	9			No	Yes	3	1.38E-01	
	1.38E-01							
H-3		1198		No	Yes	3	2.97E+05	
		2.97E+05						
H-3	239			No	Yes	3	1.01E+02	
	1.01E+02							

Spent Sources >30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Am-241	13		No	Yes	3	3.74E-02	
	3.74E-02						
U-233	5		No	Yes	3	1.88E-04	
	1.88E-04						
Pu-239	3285		No	Yes	3	1.25E+01	
	1.25E+01						
Pu-238	6		No	Yes	3	1.20E+00	
	1.20E+00						
Ra-226	21	1	No	Yes	3	3.65E+02	
	2.08E-04	3.65E+02					
Ni-63		30	No	Yes	3	7.55E+01	
		7.55E+01					
Al-26	5	4	No	Yes	3	1.17E+02	
	6.47E+00	1.11E+02					
Th-232	5		No	Yes	3	1.16E-05	
	1.16E-05						
K-40	14		No	Yes	3	2.10E-05	
	2.10E-05						
Pu-239 Neutron Gen.	62	6	No	Yes	2	6.15E+02	
	7.52E+01	5.40E+02					
Pu-238	14	1	No	Yes	3	3.35E+02	
	1.34E+01	3.22E+02					
U-234	2		No	Yes	3	4.80E-08	
	4.80E-08						
Pu-239	18299	106	No	Yes	3	9.54E+02	
	6.44E+02	3.10E+02					
Am-241	93	4	No	Yes	3	5.57E+01	
	5.50E+00	5.02E+01					
Al-26	9		No	Yes	3	1.76E+01	
	1.76E+01						
C-14	6	140	No	Yes	3	4.56E+02	
	1.64E+00	4.54E+02					

Reporting Group RADON, Site Data: Kiev SE

Country: Ukraine Reporting Year: 2005

U-238	15		No	Yes	3	4.44E+00	
	4.44E+00						
U-233	2		No	Yes	3	6.84E-05	
	6.84E-05						
Pu-239	5988		No	Yes	3	2.44E+02	
	2.44E+02						
Ra-226	74	4	No	Yes	3	5.06E+02	
	4.22E+01	4.64E+02					
Ni-63	231		No	Yes	2	5.08E+00	
	5.08E+00						

Reporting Group RADON, Site Structure: LvivSE

Country: Ukraine Reporting Year: 2005

Full Name: Lviv State Interregional Special Enterprise

License Holder(s) : Lviv State Interregional Special Enterprise. Director: Volochyi Yaroslav. Phone: +38 0322 71 23 26. Fax: +38 0322 51 19 00

The following list the waste management facilities that are located at this site.

Facility: LRW

Description	Cask for liquid radioactive waste

Storage part of the "LRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Cask 1	cask	1963	No	No	No	No

Facility: Modul 4

Description	Modul for solid radioactive waste

Storage part of the "Modul 4" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Modul 4	building	1989	No	No	No	No

Reporting Group RADON, Site Structure: LvivSE

Country: Ukraine Reporting Year: 2005

Facility: Modul 1

Description	Concrete modules for solid radioactive waste

Disposal part of the "Modul 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	200	Capacity -planned (m3)	200
Depth (m)	4		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
operation		1963	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009
EVENT: operation suspended		1982	

Facility: Modul 2

Description	Modul for solid radioactive waste

Disposal part of the "Modul 2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	120	Capacity -planned (m3)	120
Depth (m)	4		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1989	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Facility: Modul 3

Description	Modul for solid radioactive waste

Disposal part of the "Modul 3" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	120	Capacity -planned (m3)	120
Depth (m)	4		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1989	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Facility: Modul 5

Description	Moduls 5,6,8 for solid radioactive waste

Disposal part of the "Modul 5" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	360	Capacity -planned (m3)	360
Depth (m)	4		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1989	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Reporting Group RADON, Site Structure: LvivSE

Country: Ukraine Reporting Year: 2005

Facility: Modul 7

Description	Modul for solid radioactive waste

Disposal part of the "Modul 7" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	120	Capacity -planned (m3)	120
Depth (m)	4		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1989	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Facility: Modul B

Description	Modul for solid biological radioactive waste

Disposal part of the "Modul B" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	100	Capacity -planned (m3)	100
Depth (m)	4		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1989	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Reporting Group RADON, Site Structure: LvivSE

Country: Ukraine Reporting Year: 2005

Facility: SRS 1

Description	Metalic - concrete modul. Operation Years:1982-1989.

Disposal part of the "SRS 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	Yes				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1982	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009
EVENT: operation suspended		1989	

Facility: SRS 2

Description	2 Moduls for disposal SRS in operation from 1989

Disposal part of the "SRS 2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1982	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Reporting Group RADON, Site Structure: LvivSE

Country: Ukraine | Reporting Year: 2005

Facility: SRS 3

Description	Metalic - concrete modul

Disposal part of the "SRS 3" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	Yes
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
operation		1982	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2001
EVENT: operating license granted		2001	2004
EVENT: operating license granted		2004	2009

Reporting Group RADON, Site Data: LvivSE

Country: Ukraine Reporting Year: 2005

Full Name: Lviv State Interregional Special Enterprise

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Disposal	No	581	0	0	0	67	30	3	0	No

Comment #6799: The additional characteristics of the waste

Unprocessed: solid (dispersible), solid (non-dispersible)

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Th-228	2			No	Yes	3	7.65E-04	
	7.65E-04							
Na-22	1			No	Yes	3	1.30E-06	
	1.30E-06							
Fe-55	1			No	Yes	3	1.52E-03	
	1.52E-03							
Tl-204	17			No	Yes	3	4.42E-04	
	4.42E-04							
Kr-85	17			No	Yes	3	6.03E+00	
	6.03E+00							
Pm-147	152			No	Yes	3	1.60E-01	
	1.60E-01							
Ir-192	51			No	Yes	2	1.81E+01	
	1.81E+01							
H-3	6549	51		No	Yes	2	2.87E+04	
	8.77E+00	2.87E+04						
Co-57	3			No	Yes	3	1.39E-05	
	1.39E-05							
Co-60	243			No	Yes	2	7.32E+01	
	7.32E+01							
Co-60	2			No	Yes	2	5.45E-02	
	5.45E-02							
Sr-90	4421			No	Yes	2	1.08E+02	
	1.08E+02							
Cs-137	43	811		No	Yes	2	3.48E+03	
	1.12E+01	3.47E+03						
H-3	2			No	Yes	3	3.77E+00	
	3.77E+00							
Pm-147	137			No	Yes	3	1.31E-04	
	1.31E-04							
Kr-85	8			No	Yes	3	1.00E+00	
	1.00E+00							
Ir-192		8		No	Yes	2	3.23E+02	
		3.23E+02						

Reporting Group RADON, Site Data: LvivSE

Country: Ukraine Reporting Year: 2005

Co-60	2			No	Yes	2	5.49E-02	
	5.49E-02							
Sr-90	58			No	Yes	3	1.75E+01	
	1.75E+01							
Cs-137	61	57		No	Yes	2	4.54E+03	
	6.83E+01	4.47E+03						
Na-22	1			No	Yes	3	1.70E-06	
	1.70E-06							
Fe-55	1			No	Yes	3	1.90E-03	
	1.90E-03							
Tl-204	17			No	Yes	3	5.31E-04	
	5.31E-04							
Ir-192		9		No	Yes	2	8.52E+01	
		8.52E+01						
Co-57	3			No	Yes	3	3.54E-05	
	3.54E-05							
Co-60	9			No	Yes	2	1.23E-04	
	1.23E-04							
Sr-90	67			No	Yes	3	3.52E+00	
	3.52E+00							
Cs-137	11	229		No	Yes	2	1.00E+04	
	5.16E-01	1.00E+04						
Kr-85	9			No	Yes	2	6.01E+00	
	6.01E+00							
Ir-192	10	9		No	Yes	2	4.41E+02	
	1.31E+00	4.39E+02						
H-3	6551			No	Yes	2	5.92E+00	
	5.92E+00							
Co-60	110	4		No	Yes	2	9.65E+01	
	2.36E+01	7.29E+01						
Sr-90	4355			No	Yes	2	9.37E+01	
	9.37E+01							
Cs-137	81	279		No	Yes	2	1.35E+04	
	2.68E+01	1.34E+04						
Pm-147	15			No	Yes	0	3.50E+00	
	3.50E+00							
Ir-192	412			No	Yes	0	1.90E+02	
	1.90E+02							
H-3		69		No	Yes	0	8.30E+04	
		8.30E+04						
Co-60	3543			No	Yes	0	3.30E+03	
	3.30E+03							
Sr-90	296			No	Yes	0	7.70E+02	
	7.70E+02							
Cs-137		1854		No	Yes	0	7.40E+04	
		7.40E+04						

Spent Sources >30 years in disposal

Reporting Group RADON, Site Data: LvivSE

Country: Ukraine Reporting Year: 2005

Nuclide	Number of Sources/Total Activity of Sources (GBq) Group I less than or equal 4GBq num./activity	Group II more than 4GBq but less than or equal 4E+4GBq num./activity	cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
Ra-226	2		No	Yes	3	7.65E-04	
	7.65E-04						
Am-241	401		No	Yes	3	7.01E+01	
	7.01E+01						
Pu-239	1041		No	Yes	3	9.79E-01	
	9.79E-01						
Pu-238	1		No	Yes	2	1.06E+00	
	1.06E+00						
Th-232	1		No	Yes	3	2.52E-05	
	2.52E-05						
Pu-239		4	No	Yes	3	5.08E+01	
		5.08E+01					
Pu-239	6544		No	Yes	3	8.74E+01	
	8.74E+01						
Pu-238		48	No	Yes	2	3.62E+02	
		3.62E+02					
Cf-251		8	No	Yes	0	8.00E+02	
		8.00E+02					
Be-10		8	No	Yes	0	1.50E+02	
		1.50E+02					
Am-241		1	No	Yes	0	2.20E+01	
		2.20E+01					
Am-241	153		No	Yes	0	2.18E+01	
	2.18E+01						
Ra-226		56	No	Yes	0	1.30E+02	
		1.30E+02					
Ra-226	1		No	Yes	0	5.00E-03	
	5.00E-03						

Reporting Group RADON, Site Structure: Odessa SE

Country: Ukraine | Reporting Year: 2005

Full Name: Odessa State Interregional Special Enterprise

License Holder(s) : Odessa State Interregional Special Enterprise
Director: Bahchevan Dmytry
Fax: +38 048 732 36 00

The following list the waste management facilities that are located at this site.

Facility: LRW

Description	Cask for liquid radioactive waste

Storage part of the "LRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Cask 1	cask	1963	No	No	No	No
Cask 2	cask	1963	No	No	No	No

Facility: Modul 1

Description	Concrete moduls for radioactive waste disposal

Disposal part of the "Modul 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is modular			
Capacity - existing (m3)	583	Capacity -planned (m3)	583
Depth (m)	6		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2006

Reporting Group RADON, Site Structure: Odessa SE

Country: Ukraine Reporting Year: 2005

Facility: SRS 1

Description	Modul for disposal spent radioactive sources, 0,2 m3

Disposal part of the "SRS 1" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	Yes				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2006
EVENT: operation suspended		1991	

Facility: SRS 2

Description	Modul for disposal spent radioactive sources, 0,2 m3

Disposal part of the "SRS 2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	No	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	Yes				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	1	Capacity -planned (m3)	1
Depth (m)	6		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
operation		1962	
Additional Activities and Events			
EVENT: operating license granted		1995	1998
EVENT: operating license granted		1998	2003
EVENT: operating license granted		2003	2006

Reporting Group RADON, Site Data: Odessa SE

Country: Ukraine | Reporting Year: 2005

Full Name: Odessa State Interregional Special Enterprise

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	152	0	0	0	99	1	0	0	No
Comment #6813: The additional characteristics of the waste Unprocessed: liquid (aqueous)											
Mid-Active	Disposal	No	496	0	0	0	98	2	0	0	No
Comment #6814: The additional characteristics of the waste Unprocessed: solid (non-dispersible)											

Spent Sources <=30 years in disposal

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Cs-137		30		No	Yes	2	7.47E+02	
		7.47E+02						
Co-60	40			No	Yes	3	4.32E+00	
	4.32E+00							
Cs-137		974		No	Yes	2	1.18E+05	
		1.18E+05						
P-32	317			No	Yes	3	2.10E-01	
	2.10E-01							
Ru-106	2			No	Yes	3	1.30E-03	
	1.30E-03							
Tl-204	9			No	Yes	3	3.80E+00	
	3.80E+00							
Ir-192		140		No	Yes	2	2.30E+03	
		2.30E+03						
Sr-90	1659			No	Yes	2	1.10E+02	
	1.10E+02							
Pm-147	2			No	Yes	3	1.70E-02	
	1.70E-02							
Po-210		35		No	Yes	2	2.00E+03	
		2.00E+03						
Co-60		539		No	Yes	2	9.20E+03	
		9.20E+03						
Kr-85		8		No	Yes	3	2.10E+04	
		2.10E+04						
H-3		9		No	Yes	3	3.13E+04	
		3.13E+04						

Spent Sources >30 years in disposal

Reporting Group RADON, Site Data: Odessa SE

Country: Ukraine Reporting Year: 2005

Nuclide	Number of Sources/Total Activity of Sources (GBq)		cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq					
	num./activity	num./activity					
Ra-226		80	No	Yes	2	3.37E+02	
		3.37E+02					
Pu-239	3361		No	Yes	3	1.60E+03	
	1.60E+03						
U-238	1		No	Yes	0	8.60E-02	
	8.60E-02						
Pu-238		51	No	Yes	3	2.24E+03	
		2.24E+03					
Ni-63	1		No	Yes	3	1.80E+00	
	1.80E+00						
Am-241	43		No	Yes	3	1.60E-03	
	1.60E-03						

Reporting Group RADON, Site Structure: SE Komplex

Country: Ukraine Reporting Year: 2005

Full Name: State Special Enterprise "Komplex"

License Holder(s) : State Special Enterprise "Komplex"
Director: Safonov Viktor
Fax: +38 04493 5 17 08

The following list the waste management facilities that are located at this site.

Facility: PTLRW

Description	About 800 trenches and holes for temporary localization of radioactive waste, storages "Pidlisny" and "ChNPP III Stage"

Storage part of the "PTLRW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	No	Low-Active	No	No
High-Active	Yes	No			
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units						
Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
PTLRW	trench (unlined)	1986	No	Yes	No	No
Pidlisny	building	1986	No	Yes	Yes	No
CNPP III	concrete pad	1986	No	Yes	No	No

Facility: PZRW

Description	Trenches for solid radioactive waste disposal - "Buryakivka"

Disposal part of the "PZRW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	Yes	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	660000	Capacity -planned (m3)	660000
Depth (m)	6		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
operation		1987	
Additional Activities and Events			
EVENT: operating license granted		1996	1999
EVENT: operating license granted		1999	2003
EVENT: operating license granted		2003	

Reporting Group RADON, Site Data: SE Komplex

Country: Ukraine Reporting Year: 2005

Full Name: State Special Enterprise "Komplex"

Inventory Reporting Date: December 2005 Waste Matrix: Ukraine

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Mid-Active	Storage	No	1310000	0	0	0	0	0	100	0	No
Comment #6818: The additional characteristics of the waste Unprocessed: flammable, resin, sludge, solid (non-dispersible)											
Mid-Active	Disposal	No	562000	0	0	0	0	0	100	0	No
Comment #6819: The additional characteristics of the waste Unprocessed: flammable, resin, solid (non-dispersible)											
High-Active	Storage	No	3960	0	0	0	0	0	100	0	No
Comment #6822: The additional characteristics of the waste Unprocessed: flammable, resin, sludge, solid (non-dispersible)											

Reporting Group RADON, Site Structure: SE Tech

Country: Ukraine Reporting Year: 2005

Full Name: State Special Enterprise "Technocentr"

License Holder(s) : State Special Enterprise "Technocentr"
Director: Doroshenko Olexandr
Fax: +38 044 264 66 91

The following list the waste management facilities that are located at this site.

Facility: Vector

Description	Modules for radioactive waste disposal

Disposal part of the "Vector" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Mid-Active	No	Yes	Low-Active	No	No
High-Active	No	No			
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	533644
Depth (m)	12		
Host medium	sedimentary rock (plastic clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1987	1990
site selection		1990	1991
design		1991	1997
construction		1997	

REGULATORS

Country: Ukraine Reporting Year: 2005

Name	SNRCU
Full Name	State Nuclear Regulatory Committee of Ukraine
Division	
City or Town	Kiev

Comment #6780: Wastes that are regulated by the Regulator

Matrix Ukraine - High-Active, Low-Active, Mid-Active

REGULATIONS / LAWS

Country: Ukraine Reporting Year: 2005

Name	Law 1	
Title or Name	About Ratification of the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management	
Reference Number	1688-III	
Date Promulgated or Proclaimed	2000-04-20	Law

Comment #6781: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Law 2	
Title or Name	On Use of Nuclear Energy and Radiation Safety	
Reference Number		
Date Promulgated or Proclaimed	1995-02-08	Law

Comment #6782: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Law 3	
Title or Name	On Radioactive Waste Management	
Reference Number		
Date Promulgated or Proclaimed	1995-04-30	Law

Comment #6783: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Law 4	
Title or Name	On Permissive Activities in the Nuclear Energy Field	
Reference Number	1370-XIV	
Date Promulgated or Proclaimed	2000-01-11	Law

Comment #6784: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Law 5	
Title or Name	On Physical Protection of Nuclear Materials, Radioactive Wastes and Other Radiation Sources	
Reference Number	2064-III	
Date Promulgated or Proclaimed	2000-10-19	Law

Comment #6785: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

REGULATIONS / LAWS

Country: Ukraine Reporting Year: 2005

Name	Law 6	
Title or Name	On Protection of Population from Radiation Effects	
Reference Number	15/98-BP	
Date Promulgated or Proclaimed	1998-01-14	Law

Comment #6786: Wastes that are regulated by the Law

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Reg 1	
Title or Name	Requirement to the Structure and Content of Safety Analysis Report of the Radioactive Waste Treatment Facility	
Reference Number	306.3.02/3.043-2001	
Date Promulgated or Proclaimed	2001-01-26	Regulation

Comment #6787: Wastes that are regulated by the Regulation

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Reg 2	
Title or Name	Requirements to the Structure and Content of Safety Analysis Report of the Near Surface Disposal Facilities of Radioactive Waste	
Reference Number	NP 306.3.02/3.038-2000	
Date Promulgated or Proclaimed	2000-10-02	Regulation

Comment #6788: Wastes that are regulated by the Regulation

Matrix Ukraine - Low-Active, Mid-Active

Name	Reg 3	
Title or Name	Rules and Procedure to Release Radioactive Waste and By-product Radioactive Materials from Regulatory Control	
Reference Number		
Date Promulgated or Proclaimed	1997-12-10	Regulation

Comment #6789: Wastes that are regulated by the Regulation

Matrix Ukraine - Low-Active, Mid-Active

Name	Reg 4	
Title or Name	Procedure of the State Inventory of Radioactive Waste	
Reference Number	306.5.04/2.059-2002	
Date Promulgated or Proclaimed	2003-02-11	Regulation

Comment #6790: Wastes that are regulated by the Regulation

Matrix Ukraine - High-Active, Low-Active, Mid-Active

REGULATIONS / LAWS

Country: Ukraine Reporting Year: 2005

Name	Reg 5	
Title or Name	Norms of the Radiation Protection of Ukraine. Supplement:Radiation Protection from Sources of the Potential Irradiation	
Reference Number		
Date Promulgated or Proclaimed	2000-06-12	Regulation

Comment #6791: Wastes that are regulated by the Regulation

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Reg 6	
Title or Name	Sanitary Rules of Radioactive Waste Management	
Reference Number		
Date Promulgated or Proclaimed	1985-10-01	Regulation

Comment #6792: Wastes that are regulated by the Regulation

Matrix Ukraine - High-Active, Low-Active, Mid-Active

Name	Reg 7	
Title or Name	Safety Conditions and Requirements (Licensing Conditions) on Activities Associated with Radioactive Waste Processing, Storage and Disposal	
Reference Number	NP 306.5.04/2.060-2002	
Date Promulgated or Proclaimed	2002-11-06	Regulation

Name	Reg 8	
Title or Name	Provisions on the List and Requirements on the Format and Content of Documents Submitted by the Operating Organisation to Obtain Licences for Activities at Specific Stages of Radioactive Waste Disposal Facility Lifetime	
Reference Number	NP 306.2.02/3.037-2000	
Date Promulgated or Proclaimed	2000-08-15	Regulation

Name	Reg 9	
Title or Name	Safety Conditions and Requirements (Licensing Conditions) on Activities Associated with Radioactive Waste Processing, Storage and Disposal	
Reference Number	np 306.5.04/2.060-2002	
Date Promulgated or Proclaimed	2000-11-06	Regulation

Policies

Country: Ukraine | Reporting Year: 2005

National Systems

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

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

Requirements (Yes;Partially;No)

Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?

4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	No
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	No
12	implemented formal mechanisms for disseminating information to the public and for public consultation	No

Responsibilities (Complete;Incomplete)

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility

15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Incomplete

Regulatory Body Responsibility

20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete

Waste Generator and Operators of Waste Management Facilities Responsibility

24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Partially
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Partially
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Partially
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Partially

	Clearance	(Yes;No)
115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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)?	No

Disposal Facilities

	Licensing	(Yes - All;Yes - Some;No)
	If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.	
40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All

46	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)
47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - Some

	Post-Closure	(Yes;No)
48	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
49	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
50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes
	If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.	
52	access restrictions	No
53	drainage and/or leachate collection system(s)	No
54	leachate treatment systems	No
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	Yes
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

	Implementation	(Yes;No)

Policies

Country: Ukraine **Processing/Storage** Reporting Year: 2005

67	In your Country are there any waste processing facilities at the same location where the waste is generated?	Yes
68	In your Country are there any centralized waste processing facilities?	No
69	In your Country are there any mobile waste processing facilities?	No

	Foreign	(Yes;No)
108	Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?	Yes
109	Will some or all of the product(s) of processing/reprocessing be returned to your country?	No
110	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
111	Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)?	No

Spent SRS

	Registration	(Yes;No)
	Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)	
71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	No
77	**Are there local-level registries (one or more)?**	No

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

	Agreements	(Yes;No)
	Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?	
80	Government to Government agreements	No
81	Government - Supplier agreements	No
82	Supplier-User agreements	No
84	Do any agreements include suppliers that are outside of your Country?	No

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	Yes
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	Yes

Policies

Country: Ukraine **Spent SRS** Reporting Year: 2005

88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes
89	Has your Country implemented dedicated disposal facilities for spent SRS?	Yes
90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	Yes

Import-Export

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

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

Liquid HLW

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

UMMT

	Responsibility	(Yes;No)
97	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)
98	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)
106	Does Your Country have any nuclear fuel cycle facilities?	No
107	Does Your Country have any nuclear applications facilities (non fuel cycle facilities)?	Yes

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

Country Waste Profile Report for
United States of America
Reporting year: 2005

For guidance on reading Country Waste Profile Reports, please refer to the following internet based document:

http://www-newmdb.iaea.org/help/profiles8/guide.pdf

For further information, please contact the Responsible Officer via e-mail:

NEWMDB@IAEA.org

Report published on 2007-03-29 16:24:29

Waste Class Matrix(ces) Used/Defined

Country: United States of America Reporting Year: 2005

Waste Class Matrix: IAEA Def. , Not Used

Description: The Agency's standard matrix

Waste Class Matrix: USDOE

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
HLW	0	0	100
TRU	0	100	0
LLW	99.5	0.5	0
11e2 Byproduct Material	100	0	0

Description: Reference for USDOE classes: Radioactive Waste Management Manual, DOE M 435.1, 7/9/1999

Comment #85: Waste Class Comment

The US DOE has a waste class called "11e2" which is essentially by-product material. Keeping with NEWMDB guidance, this year "exsitu" remediation waste, e.g., moved to a disposal cell, will be reported. UMMT disposal cells will not be reported.

Attachment #1055: White paper with DOE waste classfication information and crosswalk to IAEA

File name: DOEwastematrix.wpd

File type: WordPerfect Document

Member State's Reference # 1

Waste Class Matrix: USNRC

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Class A LLW	100	0	0
Class B LLW	100	0	0
Class C LLW	75	25	0
Greater than Class C LLW	0	100	0
HLW	0	0	100
11e2 Byproduct Material	100	0	0

Description: NRC waste classes defined in Title 10, Code of Federal Regulations, Part 61, Subpart 55. 11e2 byproduct materials are not wast under Part 61 regulations. See separate comment on this NEWMDB reporting class.
Class C split based on analysis of actual data

Comment #7234: USNRC - 11e2

11e2 materials by definition are byproduct materials under regulations. These materials are composed of UMMT or equivalent. However, because the NEWMDB reporting requirements address UMMT materials that are moved, there is a need to have this shown as a waste class. The waste class does not fit the IAEA categories, but since surface disposed, for NEMWDB reporting is shown as 100% LILW-SL.

Attachment #1054: White paper on USNRC waste classification crosswalk to IAEA classes

File name: NRCwastematrix.wpd

File type: WordPerfect Document

Member State's Reference # 2

Waste Class Matrix(ces) Used/Defined

Country: United States of America Reporting Year: 2005

Waste Class Matrix: Past

Waste Class Name	LILW_SL%	LILW_LL%	HLW%
Ocean-disposed	99	1	0

Description: Between 1946 and 1970 the United States disposed of waste at several locations in the Atlantic Ocean and Pacific Ocean before such practices were discontinued under the London Convention. The % split between the LILW-SL and LILW-LL is an approximation.

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

This country uses the NEWMDB's definitions:

	as-generated waste	processed for handling	processed for storage	processed for disposal
unprocessed	X			
processed		X	X	X

Groups Overview

Country: United States of America Reporting Year: 2005

Reporting Group: **Commercial**

Inventory Reporting Date: December 2005

Waste Matrix Used: USNRC

Description: Sites Licensed by USNRC or Agreement States

Site Name	Facility Name	Facilities Defined		
Barnwell	Barnwell			disposal
Clive	MLLWproc	processing		
	11e2disp			disposal
	LLWdisp			disposal
	MLLWdisp			disposal
Closed LLW	Beatty			disposal
	MaxeyFlats			disposal
	Sheffield			disposal
	WestValley			disposal
National	Processors	processing		
	GTCC - SRS		storage	
	GTCC-NPP		storage	
	GTCC-Other		storage	
Richland	LLWdisp			disposal
WCS	Treatment	processing		
	Storage		storage	

Groups Overview

Country: United States of America Reporting Year: 2005

Reporting Group: **Government**

Inventory Reporting Date: December 2005

Waste Matrix Used: USDOE

Description: United States Department of Energy owned facilities

Site Name	Facility Name	Facilities Defined		
Cheney	11e2 cell			disposal
FEMP	LLWproc	processing		
	Silos		storage	
	OSDF			disposal
Hanford	LLWFac	processing	storage	
	TRUFac	processing	storage	
	CSB		storage	
	TankFarms		storage	
	WESF		storage	
	ERDF			disposal
	LLWdisp			disposal
	MLLWdisp			disposal
INL	AMWTF	processing	storage	
	INTEC	processing	storage	
	CERCLA			disposal
	RWMC-SDA			disposal
LANL	CMR SRS	processing		
	TA-54 SRS	processing		
	TA-54 TRU	processing	storage	
	TA54 AreaG	processing		disposal
LLNL	Proc/Store	processing	storage	
MEMP	LLW	processing		
Monticello	11e2 Cell			disposal
NFS	Storage		storage	
NTS	Area 5 TRU		storage	
	Area 5 GCD			disposal
	Area 5 MW			disposal
	Area3&5LLW			disposal
OakRidge	TSCAI	processing		
	ORRLLW/TRU	processing	storage	
	EMWMF			disposal
	Hydrofract			disposal
	OldBurial			disposal
	ORNL/IWMF			disposal
OCRWM	Repository			disposal
OtherDOE	Various	processing	storage	
Paducah	Proc/Store	processing	storage	
Portsmouth	Proc/Store	processing	storage	
SRS	DWPF	processing		
	E-AreaFac	processing	storage	
	HLW Tanks	processing	storage	
	GlassStore		storage	
	BurialGrd			disposal
	E-AreaDisp			disposal
	Saltstone			disposal
WIPP	WIPP			disposal
WSSRAP	11e2 cell			disposal
WVDP	TRU&LLW	processing	storage	

	HLW		storage	

Reporting Group: **OtherGovt**

Inventory Reporting Date: December 2005

Waste Matrix Used: USDOE

Description: Niagara Falls Storage Site currently managed by U.S. Army Corps of Engineers under Formerly Utilized Sites Remedial Action Project

Site Name	Facility Name	Facilities Defined		
NFSS	11e2			disposal

Reporting Group: **PastPract**

Inventory Reporting Date: December 2005

Waste Matrix Used: Past

Description: Past practice ocean dumping sites

Site Name	Facility Name	Facilities Defined		
Atlantic	SeaDispose			disposal
Pacific	SeaDispose			disposal

Comment #7239: Ocean Dumping Information

Provided to IAEA on 27 October 1989.

Reporting Group Commercial, Site Structure: Barnwell

Country: United States of America Reporting Year: 2005

Full Name: Barnwell

License Holder(s) : Chem Nuclear / EnergySolutions, licensed by the State of South Carolina (USNRC Agreement State)

The following list the waste management facilities that are located at this site.

Facility: Barnwell

Description	LLW disposal facility

Disposal part of the "Barnwell" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	Yes	Class B LLW	Yes	Yes
Class C LLW	Yes	Yes	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	880000	Capacity -planned (m3)	880000
Depth (m)	1-9		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
commissioning		1971	1971
operation		1971	2038
closure	Yes	2039	2044
institutional control	Yes	2045	

Comment #7248: Barnwell Disposal Facility

Under current license from the State of South Carolina, this facility will only accept waste from generators withing the Atlantic Compact (regional group of states) in 2008.

Reporting Group Commercial, Site Data: Barnwell

Country: United States of America Reporting Year: 2005

Full Name: Barnwell

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Class A LLW	Disposal	Yes	716918	62	14	0	15	0	9	0	Yes
Comment #5671: Waste classes and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1971-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											
Class B LLW	Disposal	Yes	51410	94	0	0	5	0	1	0	Yes
Comment #5672: Waste class and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1971-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											
Class C LLW	Disposal	Yes	24978	90	0	0	8	0	2	0	Yes
Comment #5673: Waste class and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1965-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											

Reporting Group Commercial, Site Structure: Clive

Country: United States of America Reporting Year: 2005

Full Name: EnergySolutions, Clive

License Holder(s) : EnergySoltuions (licenses by State of Utah as USNRC Agreement State)

The following list the waste management facilities that are located at this site.

Facility: MLLWproc

Description	Mixed low-level waste processing of waste prior to disposal in the MLLW cell

Processing part of the "MLLWproc" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1995

Facility: 11e2disp

Description	11e2 byproduct material disposal cell

Disposal part of the "11e2disp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	Yes	Yes
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	3440000	Capacity -planned (m3)	3440000
Depth (m)	0		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
construction			1988
commissioning		1988	1988
operation		1988	2023
closure	Yes	2024	2024
institutional control	Yes	2025	

Comment #7238: 11e2 disposal

Envirocare established a 11e2 byproduct material disposal cell adjacent to USDOE UMTRA (UMMT) facility. Information does not include USDOE waste data.

Reporting Group Commercial, Site Structure: Clive

Country: United States of America Reporting Year: 2005

Facility: LLWdisp

Description	disposal facility for class A low-level waste

Disposal part of the "LLWdisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	Yes	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered near surface		
Facility is non modular			
Capacity - existing (m3)	4571000	Capacity -planned (m3)	4571000
Depth (m)	10		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1988	1988
site selection		1988	1988
design		1988	1990
construction		1990	1990
commissioning		1991	1991
operation		1991	2023
closure	Yes	2024	2024
institutional control	Yes	2025	

Comment #7237: Waste

Capacity as of 12/31/2003 from Envirocare of Utah email. Low Activity Class A disposal begian in 1991 and full Class A disposal begin in 2001. Efforts to obtain a license and approval to operate Class B and C disposal facilities were terminated in 2004.

Reporting Group Commercial, Site Structure: Clive

Country: United States of America Reporting Year: 2005

Facility: MLLWdisp

Description	Disposal facility for Class A mixed low-level waste

Disposal part of the "MLLWdisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	Yes	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	816000	Capacity -planned (m3)	816000
Depth (m)	10		
Host medium	sedimentary rock (consolidated clay)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1988	1988
site selection		1988	1988
design		1988	1990
construction		1990	1994
commissioning		1995	1995
operation		1995	2023
closure	Yes	2024	2123
institutional control	Yes	2124	

Reporting Group Commercial, Site Data: Clive

Country: United States of America Reporting Year: 2005

Full Name: EnergySolutions, Clive

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Class A LLW	Disposal	No	224160	5	0	0	0	0	95	0	Yes
Class A LLW	Disposal	Yes	80131	0	0	0	0	0	100	0	Yes
Comment #9905: Waste characterization Processed waste is mixed low-level waste, while unprocessed waste reported is non-mixed.											
11e2 Byproduct Material	Disposal	No	1078517	0	0	0	0	0	100	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Deactivation (of Sodium)			same	
Oxidation			same	
Thermal Desorption			increase	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Macroencapsulation			increase	
Polymerization			increase	
Stabilization			same	

Reporting Group Commercial, Site Structure: Closed LLW

Country: United States of America Reporting Year: 2005

Full Name: Closed commercial LLW disposal sites

License Holder(s) : Licenses terminated on closure

The following list the waste management facilities that are located at this site.

Facility: Beatty

Description	Closed commercial LLW facility in Beatty, Nevada Long-term institutional control by State of Nevada

Disposal part of the "Beatty" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	No	Class B LLW	Yes	No
Class C LLW	Yes	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	137500	Capacity -planned (m3)	137500
Depth (m)			
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
operation		1962	1992
closure		1992	1992
institutional control		1992	

Reporting Group Commercial, Site Structure: Closed LLW

Country: United States of America Reporting Year: 2005

Facility: MaxeyFlats

Description	Closed commercial LLW disposal site at Maxey Flats, Kentucky State of Kentucky

Disposal part of the "MaxeyFlats" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	No	Class B LLW	Yes	No
Class C LLW	Yes	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	135500	Capacity -planned (m3)	135500
Depth (m)			
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1963	1963
operation		1963	1977
closure		1977	1977
institutional control		1977	

Facility: Sheffield

Description	Closed commercial LLW disposal facility located in Sheffield, IL Long-term institutional control by Illinois Department of Nuclear Safety

Disposal part of the "Sheffield" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	No	Class B LLW	Yes	No
Class C LLW	Yes	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	88380	Capacity -planned (m3)	88380
Depth (m)			
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1968	1968
operation		1968	1978
closure		1978	1978
institutional control		1978	

Reporting Group Commercial, Site Structure: Closed LLW

Country: United States of America Reporting Year: 2005

Facility: WestValley

Description	Closed commercial LLW facility at West Valley Nuclear Services Site, New York, Under control of New York State Energy Research and Development Authority

Disposal part of the "WestValley" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	No	Class B LLW	Yes	No
Class C LLW	Yes	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	77070	Capacity -planned (m3)	77070
Depth (m)			
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1963	1963
operation		1986	1986
closure		1986	1986
institutional control		1986	

Reporting Group Commercial, Site Data: Closed LLW

Country: United States of America Reporting Year: 2005

Full Name: Closed commercial LLW disposal sites

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Class A LLW	Disposal Beatty	Yes	132000	30	30	0	30	0	10	0	Yes
Class A LLW	Disposal MaxeyFlats	Yes	130000	30	30	0	30	0	10	0	Yes
Class A LLW	Disposal Sheffield	Yes	84800	30	30	0	30	0	10	0	Yes
Class A LLW	Disposal WestValley	Yes	74000	20	0	50	10	0	20	0	Yes
Comment #7359: Waste classes and generators Estimated splits between class A, B, and C are arbitrary and assumed based on Beatty data. Generator %s are estimated.											
Class B LLW	Disposal Beatty	Yes	4100	50	0	0	40	0	10	0	Yes
Class B LLW	Disposal MaxeyFlats	Yes	4100	50	0	0	40	0	10	0	Yes
Class B LLW	Disposal Sheffield	Yes	2700	50	0	0	40	0	10	0	Yes
Class B LLW	Disposal WestValley	Yes	2300	20	0	50	10	0	20	0	Yes
Comment #7360: Waste classes and generators Estimated splits between class A, B, and C are arbitrary and assumed based on Beatty data. Generator %s are estimated											
Class C LLW	Disposal Beatty	Yes	1400	50	0	0	40	0	10	0	Yes
Class C LLW	Disposal MaxeyFlats	Yes	1400	50	0	0	40	0	10	0	Yes
Class C LLW	Disposal Sheffield	Yes	880	50	0	0	40	0	10	0	Yes
Class C LLW	Disposal WestValley	Yes	770	20	0	50	10	0	20	0	Yes
Comment #7361: Waste classes and generators Estimated splits between class A, B, and C are arbitrary and assumed based on Beatty data. Generator %s are estimated											

Reporting Group Commercial, Site Structure: National

Country: United States of America Reporting Year: 2005

Full Name: Grouping of multiple licensees

License Holder(s) : Various utilities and corporations licensed by USNRC or Agreement States

The following list the waste management facilities that are located at this site.

Facility: Processors

Description	Many many commercial firms in the USA provide treatment/conditioning services (see link in reading room to www.bpdirectory.com)

Processing part of the "Processors" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1960

Facility: GTCC - SRS

Description	GTCC sealed Source inventory

Storage part of the "GTCC - SRS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
SRS	Yes	Yes			
List SRS?	No				

Capacity	Various storage areas across the nation

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	0	No	No	No	Yes

Facility: GTCC-NPP

Description	Estimate of greater than class C LLW awaiting disposal at commercial facilities

Storage part of the "GTCC-NPP" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	Yes	Yes
HLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Various storage pools and independent storage facilities at NPPs contain GTCC LLW				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
NPP	pool	0	No	No	No	No
NPP	cask	0	No	No	Yes	No

Comment #7268: GTCC

Information on GTCC LLW is limited at this time. An Environmental Impact Statements is in development including an estimate of waste volume. GTCC waste has been safely stored at nuclear power plants for many years awaiting the US goverment's decision on disposal.

Facility: GTCC-Other

Description	GTCC other than sealed sources and at nuclear power plants. Includes industrial users.

Storage part of the "GTCC-Other" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	Yes	Yes
HLW	No	No	11e2 Byproduct Material	No	No
SRS	Yes	No			
List SRS?	No				
Capacity	At various locations throughout the nation				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Various	building	0	No	No	No	Yes

Reporting Group Commercial, Site Data: National

Country: United States of America Reporting Year: 2005

Full Name: Grouping of multiple licensees

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Greater than Class C LLW	Storage GTCC-NPP	No	111	100	0	0	0	0	0	0	No
Greater than Class C LLW	Storage GTCC-Other	No	95	0	0	0	100	0	0	0	No

Comment #7378: GTCC in storage at commercial facilities

Includes 19 m3 of sealed sources and 76 m3 of other GTCC waste

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Amalgamation (of Mercury)			same	
Compaction			same	
Decontamination			same	
Evaporation			same	
Filtration			same	
Incineration			same	
Ion Exchange			same	
Shredding			same	
Size Reduction			same	
Super Compaction			same	
Thermal Treatment (non incineration)			same	
Water/Acid Washing			same	

Comment #7376: Represents all commercial firms across the USA

The Low-Level Waste Forum, Inc., maintains a national directory of brokers and processors. These private concerns provide treatment, conditioning, and transportation services to generators of LLW and 11(e)2 waste. The listing of these services is found at www.bpdirectory.com. The data base, as of October 2006, contained 83 brokers and processors.

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Solidification			same	
Stabilization			same	
Vitrification			same	

Comment #7377: Represents commercial firms across the USA

The Low-Level Waste Forum, Inc., maintains a national directory of brokers and processors. These private concerns provide treatment, conditioning, and transportation services to generators of LLW and 11(e)2 waste. The listing of these services is found at www.bpdirectory.com. The data base, as of October 2006, contained 83 brokers and processors.

Reporting Group Commercial, Site Structure: Richland

Country: United States of America Reporting Year: 2005

Full Name: Richland, Washington, Radioactive Disposal Facility
U.S. Ecology (subsidiary of American Ecology Inc.)

License Holder(s) : U.S. Ecology/American Ecology Corp. (licesnsed by State of Washington as a USNRC Agreement State)

The following list the waste management facilities that are located at this site.

Facility: LLWdisp

Description	Northwest Compact and Rocky Mountain Compact regions LLW Disposal Facility, operated by U.S. Ecology Disposal facility land leased from USDOE by State of Washington

Disposal part of the "LLWdisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	Yes	Yes	Class B LLW	Yes	Yes
Class C LLW	Yes	Yes	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	1700000	Capacity -planned (m3)	1700000
Depth (m)	12		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1965	1965
operation		1965	2055
closure	Yes	2056	2056
institutional control	Yes	2056	

Reporting Group Commercial, Site Data: Richland

Country: United States of America Reporting Year: 2005

Full Name: Richland, Washington, Radioactive Disposal Facility
U.S. Ecology (subsidiary of American Ecology Inc.)

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Class A LLW	Disposal	Yes	386616	45	20	0	25	0	10	0	Yes
Comment #5675: Waste class and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1965-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											
Class B LLW	Disposal	Yes	3650	93	0	0	5	0	2	0	Yes
Comment #5676: Waste classes and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1965-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											
Class C LLW	Disposal	Yes	2978	76	0	0	21	0	3	0	Yes
Comment #5677: Waste classes and generator % 1986-2005 data on waste classification and generators (MIMS database) was extrapolated to historical data (1965-1985) found in the IDB report Rev 9. Splits between class and generator are therefore estimates based on best data available.											

Reporting Group Commercial, Site Structure: WCS

Country: United States of America Reporting Year: 2005

Full Name: Waste Control Specialists

License Holder(s) : Waste Control Specialists (licensed by State of Texas Agreement State and USNRC)

Comment #12132: WCS disposal

Waste Control Specialists currently has license applications pending for Class A, B, and C LLW (mixed LLW) and 11e.(2) byproduct material. If facilities are licensed and constructed information will be reported in the future.

The following list the waste management facilities that are located at this site.

Facility: Treatment

Description	Treatment facility for hazardous and mixed low-level waste under RCRA Part B permt

Processing part of the "Treatment" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	No	No
HLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1997

Facility: Storage

Description	Waste storage facility for some transuranic/GTCC waste and planned 11e.(2)

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Class A LLW	No	No	Class B LLW	No	No
Class C LLW	No	No	Greater than Class C LLW	Yes	Yes
HLW	No	No	11e2 Byproduct Material	Yes	Yes
SRS	No	No			
List SRS?	No				
Capacity	About 3,000 cubic meters total capacity in facility				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1998	No	No	No	No
11e.(2)	concrete pad	2005	No	No	No	No

Reporting Group Commercial, Site Data: WCS

Country: United States of America Reporting Year: 2005

Full Name: Waste Control Specialists

Inventory Reporting Date: December 2005 Waste Matrix: USNRC

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Greater than Class C LLW	Storage	Yes	45.8	0	0	0	0	0	100	0	No

Comment #7413: GTCC at WCS

WCS is storing greater than class C LLW generated as a result of cleanup of Gulf Nuclear Inc. sites in Texas by the State of Texas and U.S. EPA pending a disposal path.

Class	Location	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Storage	Yes	22243	0	0	0	0	100	0	0	No

Comment #12141: Waste Storage facilities/Class 11e2 Byproduct M/Si

3776 canisters filled with processed 11e(2) byproduct material formerly stored at the DOE Fernald site are in storage awaiting disposal. WCS has applied for a license to construct a disposal facility. A decision on the license is expected in 2007.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Chemical Precipitation			same	
Compaction			same	
Decontamination			same	
Shredding			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Solidification			same	
Stabilization			same	

Reporting Group Government, Site Structure: Cheney

Country: United States of America Reporting Year: 2005

Full Name: Cheney Disposal Cell

License Holder(s) : U.S. Department of Energy, Grand Junction Office

The following list the waste management facilities that are located at this site.

Facility: 11e2 cell

Description	Cheney or Grand Junction Disposal Site

Disposal part of the "11e2 cell" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	Yes	Yes
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	3600000	Capacity -planned (m3)	3600000
Depth (m)	2-20		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1991	1991
operation		1991	2023
closure		1994	2023

Reporting Group Government, Site Data: Cheney

Country: United States of America Reporting Year: 2005

Full Name: Cheney Disposal Cell

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Disposal	No	3592000	0	0	0	0	0	100	0	No

Reporting Group Government, Site Structure: FEMP

Country: United States of America Reporting Year: 2005

Full Name:	Fernald Environmental Management Project, formerly Feed Materials Production Center
License Holder(s) :	U.S. Department of Energy, Ohio Field Office

The following list the waste management facilities that are located at this site.

Facility: LLWproc

Description	LLW treatment facilities

Processing part of the "LLWproc" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1951

Facility: Silos

Description	11e2 silos

Storage part of the "Silos" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	Yes	No
SRS	No	No			
List SRS?	No				
Capacity	Silos 1 and 2 contain 8,900 cubic yards; silo 3 contais 5,100 cubic yards (to be decommissioned in 2005-2006)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Silos1,2,3	tank (concrete)	1951	No	Yes	No	No

Reporting Group Government, Site Structure: FEMP

Country: United States of America Reporting Year: 2005

Facility: OSDF

Description	Onsite Disposal Facility - Remediation Waste

Disposal part of the "OSDF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	2300000	Capacity -planned (m3)	2300000
Depth (m)	0-15		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
construction		1997	2006
commissioning		1997	2006
operation		1997	2006
closure		2001	2006
institutional control	Yes	2006	

Reporting Group Government, Site Data: FEMP

Country: United States of America Reporting Year: 2005

Full Name: Fernald Environmental Management Project, formerly Feed Materials Production Center

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	3086	0	0	0	0	0	100	0	No
LLW	Disposal	No	2260193	0	0	0	0	0	100	0	No

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Storage Silos	No	1627	0	0	0	0	100	0	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Ion Exchange			decrease	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			increase	
Grouting			increase	
Stabilization			same	

Reporting Group Government, Site Structure: Hanford

Country: United States of America Reporting Year: 2005

Full Name: Hanford Site

License Holder(s) : U.S. Department of Enery, Richland Operations Office

U.S. Department of Energy, Office of River Protection

The following list the waste management facilities that are located at this site.

Facility: LLWFac

Description	Storage, characterization, and treatment of LLW awaiting disposal

Processing part of the "LLWFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1985

Storage part of the "LLWFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	300,000 square feet (64,000 drum equivalents) plus. 25 trenches at 4 burial grounds for TRU; now being retrieved				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
MLLW	building	1987	No	No	Yes	No
LLW	building	1987	No	No	Yes	No

Facility: TRUFac

Description	TRU characterization and treatment facilities. 25 trenches at 4 burial grounds for TRU; now being retrieved

Processing part of the "TRUFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1997

Storage part of the "TRUFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Sufficient retrievable storage capacity for 15 years				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
trenches	trench (unlined)	1970	No	Yes	No	No
CWC	building	1985	No	No	No	No

Facility: CSB

Description	Cansiter Storage Building - contains 6 vaults with storage wells for HLW and SNF canisters

Storage part of the "CSB" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	Yes	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	1320 cansiters (HLW or SNF)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
CSBvaults	building	2000	No	No	No	No

Comment #7264: CSB

Currently in operation for spent fuel storage only.

Reporting Group Government, Site Structure: Hanford

Country: United States of America Reporting Year: 2005

Facility: TankFarms

Description	Hanford Tank Farms with HLW, LLW, and TRU waste

Storage part of the "TankFarms" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	No	TRU	Yes	No
LLW	Yes	No	11e2 Byproduct Material	No	No
SRS	No	No			

List SRS?	No
Capacity	Over 210 million liters

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
DST	tank (stainless steel)	1971	No	No	No	No
SST	tank (other)	1944	No	No	No	No

Facility: WESF

Description	Waste encapsulation and storage facility Hot cells and storage pool used for storage of Cs and Sr capsules separated from HLW

Storage part of the "WESF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	Yes	No			

List SRS?	Yes
Capacity	12 storage pools

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
WESF	pool	1974	No	No	No	Yes

Reporting Group Government, Site Structure: Hanford

Country: United States of America Reporting Year: 2005

Facility: ERDF

Description	Environmental Restoration Disposal Facility

Disposal part of the "ERDF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	3250000	Capacity -planned (m3)	4300000
Depth (m)	0-70		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1992	1995
site selection		1994	1995
design		1994	1996
construction		1995	1996
commissioning		1996	1996
operation		1996	2035
closure	Yes	2035	2035
institutional control	Yes	2035	2096

Reporting Group Government, Site Structure: Hanford

Country: United States of America Reporting Year: 2005

Facility: LLWdisp

Description	Hanford 200 Area Burial Grounds, excluding Trenches 31 & 34 used for MLLW disposal and associated processing facilities

Disposal part of the "LLWdisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	2000000	Capacity -planned (m3)	2000000
Depth (m)	6-24		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design		1945	1945
construction		1945	1945
commissioning		1945	1945
operation	Yes	1945	2035
closure	Yes	2035	2035
institutional control	Yes	2035	

Facility: MLLWdisp

Description	Mixed Waste Trenches 31 & 34 and associated processing facilities

Disposal part of the "MLLWdisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	21000	Capacity -planned (m3)	42000
Depth (m)	6-24		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1945	1945
site selection		1945	1945
design		1986	1986
construction		1986	1986
commissioning		1987	1987
operation		1987	2035
closure	Yes	2035	2035
institutional control	Yes	2035	

Reporting Group Government, Site Data: Hanford

Country: United States of America Reporting Year: 2005

Full Name: Hanford Site

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage TankFarms	No	207198	0	0	0	0	100	0	0	No

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage	No	11258	0	0	0	0	100	0	0	No

Comment #5682: Required processing

Legacy wastes stored in drums, boxes, and tanks. May have been processed prior to storage, but will require some processing, e.g. repackaging, prior to shipment.

LLW	Storage	No	7443	0	0	0	0	100	0	0	No
LLW	Storage	Yes	348	0	0	0	0	100	0	0	No

Comment #7412: LLW storage numbers

The unprocessed inventory reported is mixed LLW; the processed inventory is non-mixed LLW.

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Disposal ERDF	No	2932000	0	0	0	0	0	100	0	No
LLW	Disposal LLWdisp	Yes	308169	0	0	0	0	80	20	0	Yes
LLW	Disposal MLLWdisp	Yes	106469	0	0	0	0	95	5	0	Yes

Comment #12142: Hanford disposal

Volumes reported include reactor compartments disposed at Hanford. Historical waste sites not on the central plateau, e.g., 100 Areas, are being remediated and waste is being disposed at ERDF. Thus, waste volumes are reported at ERDF when disposed.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Filtration			same	
Wastewater Treatment			same	

Spent Sources <=30 years in storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			cond	uncond	cat.	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II more than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num./activity	num./activity	num./activity					
Sr-90			601	No	Yes	1	8.50E+08	1996.06
			8.50E+08					
Cs-137			1328	No	Yes	1	2.00E+09	1996.06
			2.00E+09					

Comment #7358: Source description

These sources contain separated cesium and strontium in large quantities and therefore category 1 was chosen to represent them.

Reporting Group Government, Site Structure: INL

Country: United States of America Reporting Year: 2005

Full Name: Idaho National Laboratory

License Holder(s) : U.S. Department of Energy, Idaho Operations Office

The following list the waste management facilities that are located at this site.

Facility: AMWTF

Description	Advanced Mixed Waste Treatment Project for retrieval characterization, packaging, sorting/size reduction of TRU and suspect TRU waste

Processing part of the "AMWTF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	2003

Storage part of the "AMWTF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Waste stored on asphalt pads (now being retreived and closed) and in buildings (approximately 66,000 m3)				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TRUpads	mound	1970	Yes	No	No	No
TRUbuild	building	1996	No	No	Yes	No

Reporting Group Government, Site Structure: INL

Country: United States of America Reporting Year: 2005

Facility: INTEC

Description	Idaho Nuclear Technology and Engineering Center; contains HLW processing and storage facilities, former reprocessing plant and other associated facilities

Processing part of the "INTEC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1958

Storage part of the "INTEC" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	3,420,000 gallons (15 tanks) plus bin sets containing 4,400 cubic meters of HLW calcine				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
HLWTnkFarm	tank (stainless steel)	1963	No	No	No	No
CalcineBin	tank (stainless steel)	1963	No	No	Yes	No
LLW/MLLW	building	1963	No	No	No	No

Reporting Group Government, Site Structure: INL

Country: United States of America Reporting Year: 2005

Facility: CERCLA

Description	Idaho CERCLA Disposal Facility and INEEL Remediation Unit

Disposal part of the "CERCLA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	200000	Capacity -planned (m3)	200000
Depth (m)	0-5		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1995	1998
site selection		1996	1998
design		1997	2002
construction		2002	2012
commissioning		2003	2003
operation		2003	2012
closure	Yes	2012	2012
institutional control	Yes	2012	2045

Comment #7266: Remediation waste disposal

Disposal of contaminated soil in the INL remediation waste facility (CERCLA) disposal began in October 2003.

Reporting Group Government, Site Structure: INL

Country: United States of America Reporting Year: 2005

Facility: RWMC-SDA

Description	Radioactive Waste Management Complex -Subsurface Disposal Area

Disposal part of the "RWMC-SDA" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	97000	Capacity -planned (m3)	97000
Depth (m)	1-8		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1949	1951
site selection		1949	1951
design		1949	1951
construction		1952	1952
commissioning		1952	1952
operation		1952	2020
closure	Yes	2020	2020
institutional control	Yes	2020	

Reporting Group Government, Site Data: INL

Country: United States of America Reporting Year: 2005

Full Name: Idaho National Laboratory

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location Form	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage Liquid	No	3400	0	0	0	0	100	0	0	No
HLW	Storage Solid	No	4400	0	0	0	0	100	0	0	No

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage AMWTF	No	46800	0	0	0	0	100	0	0	No

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	23935	0	0	0	0	100	0	0	No
LLW	Storage	Yes	2162	0	0	0	0	100	0	0	No

Comment #12167: Waste Storage facilities/Class LLW/Site INL

Unprocessed waste is mixed LLW primarily waste awaiting processing in the Advanced Mixed Waste Treatment facility. A large portion contains 10-100 nCi of transuranic isotopes, and was stored with transuranic waste until retrieved.

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Disposal CERCLA	No	144164	0	0	0	0	0	100	0	No
LLW	Disposal RWMC-SDA	Yes	55000	0	0	0	0	0	100	0	No

Comment #7357: INL disposal inventory

Disposed volumes as of 9/30/2006. RWMC-SDA volumes from 1990 to present (55,000). Does not include historical volume (142,200) from Table 4.4 of 1993 IDB (rev 9), some of which is undergoing remedial action.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Calcination				Yes
Compaction			same	
Evaporation			same	
Size Reduction			decrease	
Super Compaction			increase	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Solidification			same	

Reporting Group Government, Site Structure: LANL

Country: United States of America Reporting Year: 2005

Full Name: Los Alamos National Laboratory

License Holder(s) : U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Site Office

The following list the waste management facilities that are located at this site.

Facility: CMR SRS

Description	The Chemical and Metallurgy Research Building provides sealed source consolidation services

Processing part of the "CMR SRS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	Yes	No			
List SRS?	Yes				

Type	conditioning
Year opened	1955, Estimate

Facility: TA-54 SRS

Description	Technical Area 54 provides storage for sources of the USDOE Offsite Recovery Program and limited disposal for sources meeting LLW disposal facility acceptance requirements

Processing part of the "TA-54 SRS" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	Yes	No			
List SRS?	Yes				

Type	conditioning
Year opened	1995, Estimate

Reporting Group Government, Site Structure: LANL

Country: United States of America Reporting Year: 2005

Facility: TA-54 TRU

Description	TRU waste facilities

Processing part of the "TA-54 TRU" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1970

Storage part of the "TA-54 TRU" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Capacity	1970-1979 in trenches; 1979-1991 on asphalt pads covered with soil; 1991-present in fabric domes; some RHTRU in shafts

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Buildings	building	1985	No	No	No	No
Berms	mound	1979	Yes	No	No	No
UG	trench (unlined)	1970	Yes	No	No	No

Reporting Group Government, Site Structure: LANL

Country: United States of America Reporting Year: 2005

Facility: TA54 AreaG

Description	Area G disposal area, Technical Area 54; waste compactor is treatment

Processing part of the "TA54 AreaG" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1945

Disposal part of the "TA54 AreaG" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	1600000	Capacity -planned (m3)	1600000
Depth (m)	2-20		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1957	1957
operation		1957	2070
closure	Yes	2070	2070
institutional control	Yes	2070	

Reporting Group Government, Site Data: LANL

Country: United States of America Reporting Year: 2005

Full Name: Los Alamos National Laboratory

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage TA-54 TRU	No	6722	0	0	0	0	100	0	0	No

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	Yes	4	0	0	0	100	0	0	0	Yes

Comment #12159: Waste Storage facilities/Class LLW/Site LANL

Inventory of DOE disused sealed sources (23 total)

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Disposal TA54 AreaG	Yes	230000	0	0	0	0	100	0	0	Yes

Comment #12152: Waste Disposal facilities/Class LLW/Site LANL

Disposed waste from 1957-2005.

Processing - Treatment method(s)

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

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	

Spent Sources >30 years in storage Waste data available, will not be reported.

Attachment #1057: USDOE sealed source (both used and disused) inventory as of July 2004

File name: Sealed Sources.doc

File type: MS Office Document

Member State's Reference # Sources

Reporting Group Government, Site Structure: LLNL

Country: United States of America Reporting Year: 2005

Full Name: Lawrence Livermore National Laboratory

License Holder(s) : U.S. Department of Energy, National Nuclear Security Admnistration

The following list the waste management facilities that are located at this site.

Facility: Proc/Store

Description	Various laboratory waste management processing and storage facilities

Processing part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1950

Storage part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	sufficient for laboratory operations				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1950	No	No	No	No

Reporting Group Government, Site Data: LLNL

Country: United States of America Reporting Year: 2005

Full Name: Lawrence Livermore National Laboratory

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage	Yes	201	0	0	0	0	100	0	0	No
LLW	Storage	No	250	0	0	0	0	100	0	0	No
LLW	Storage	Yes	502	0	0	0	0	100	0	0	No

Comment #12153: Waste Storage facilities/Class LLW/Site LLNL

Unprocessed is mixed LLW and processed is LLW.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Evaporation			same	
Size Reduction			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Stabilization			same	

Reporting Group Government, Site Structure: MEMP

Country: United States of America Reporting Year: 2005

Full Name: Miamisburg Environmental Management Project

License Holder(s) : U.S. Department of Energy, Ohio Operations Office, Miamisburg Project Office

The following list the waste management facilities that are located at this site.

Facility: LLW

Description	LLW packaging

Processing part of the "LLW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1949

Reporting Group Government, Site Data: MEMP

Country: United States of America | Reporting Year: 2005

Full Name: Miamisburg Environmental Management Project

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			decrease	

Reporting Group Government, Site Structure: Monticello

Country: United States of America Reporting Year: 2005

Full Name: Monticello Remedial Action Project - Disopsal Cell

License Holder(s) : U.S. Department of Energy, Idaho Operations Office, Grand Junction Office

The following list the waste management facilities that are located at this site.

Facility: 11e2 Cell

Description	Disposal cell - mill tailing design

Disposal part of the "11e2 Cell" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	Yes	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	2000000	Capacity -planned (m3)	2000000
Depth (m)	0-15		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
site selection			1994
design		1995	1995
construction		1995	1997
commissioning		1997	1997
operation		1997	2001
closure		2001	2001
institutional control		2002	

Reporting Group Government, Site Data: Monticello

Country: United States of America Reporting Year: 2005

Full Name: Monticello Remedial Action Project - Disopsal Cell

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Disposal	No	1911387	0	0	0	0	0	100	0	No

Reporting Group Government, Site Structure: NFS

Country: United States of America Reporting Year: 2005

Full Name: Decommissioning at Nuclear Fuel Services

License Holder(s) : U.S. Department of Energy

The following list the waste management facilities that are located at this site.

Facility: Storage

Description	Storage awaiting shipment to disposal

Storage part of the "Storage" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Sufficent for project				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1960	No	No	No	No

Reporting Group Government, Site Data: NFS

Country: United States of America Reporting Year: 2005

Full Name: Decommissioning at Nuclear Fuel Services

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	Yes	2502	0	0	0	0	0	100	0	Yes

Reporting Group Government, Site Structure: NTS

Country: United States of America Reporting Year: 2005

Full Name: Nevada Test Site

License Holder(s) : U.S. Department of Energy, National Nuclear Security Administration, Nevada Site Office

The following list the waste management facilities that are located at this site.

Facility: Area 5 TRU

Description	Storage of TRU awaiting disposal

Storage part of the "Area 5 TRU" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			

List SRS?	No
Capacity	Pads covered with buildings store TRU waste shipped from other sites pending WIPP disposal.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TRU	building	1974	No	No	No	No

Facility: Area 5 GCD

Description	Greater confinement boreholes at Area 5

Disposal part of the "Area 5 GCD" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	No
LLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No

List SRS	No		
Type	borehole		
Facility is non modular			
Capacity - existing (m3)	1900	Capacity -planned (m3)	1900
Depth (m)	36		
Host medium	volcanic tuff		

Phase	Estimate	Start Year	End Year
construction		1983	1989
commissioning		1983	1989
operation		1983	1989
closure	Yes	1984	2015
institutional control	Yes	2015	

Reporting Group Government, Site Structure: NTS

Country: United States of America Reporting Year: 2005

Facility: Area 5 MW

Description	Area 5 Pit 3, Mixed Waste Disposal Unit

Disposal part of the "Area 5 MW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	20000	Capacity -planned (m3)	20000
Depth (m)	2-30		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design			2002
construction			2003
commissioning			2003
operation		1995	2015
closure	Yes	2015	2015
institutional control	Yes	2015	

Facility: Area3&5LLW

Description	Areas 3&5 Radioactive Waste Management Sites (Area 3-use of subsidence craters from testing for LLW disposal) (Area 5-trenches)

Disposal part of the "Area3&5LLW" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	3700000	Capacity -planned (m3)	3700000
Depth (m)	2-30		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
construction		1960	1960
commissioning		1960	1960
operation		1960	2015
closure	Yes	1965	2015
institutional control	Yes	2015	

Reporting Group Government, Site Data: NTS

Country: United States of America Reporting Year: 2005

Full Name: Nevada Test Site

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage	No	380	0	0	0	0	100	0	0	No
TRU	Disposal	No	200	0	0	0	0	100	0	0	No

Comment #5717: TRU disposal

TRU waste disposal in greater confinement boreholes at NTS under past practice.

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Disposal Area3&5LLW	No	548291	0	0	0	0	100	0	0	No
LLW	Disposal Area 5 MW	Yes	8664	0	0	0	0	100	0	0	No
LLW	Disposal Area3&5LLW	Yes	80091	0	0	0	0	100	0	0	No

Reporting Group Government, Site Structure: OakRidge

Country: United States of America Reporting Year: 2005

Full Name: Oak Ridge Reservation, including Oak Ridge National Laboratory and East Tennessee Technology Park

License Holder(s) : U.S. Department of Energy, Oak Ridge Operations Office

The following list the waste management facilities that are located at this site.

Facility: TSCAI

Description	Facilities for neutralization, solidification, packaging, overpacking, evaporation, compaction, and incineration (Toxic Substance Controlled Air Incinerator).

Processing part of the "TSCAI" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1991

Reporting Group Government, Site Structure: OakRidge

Country: United States of America Reporting Year: 2005

Facility: ORRLLW/TRU

Description	Various Oak Ridge Reservation waste management facilities including ORNL, /Bethel Valley/Melton Valley treatment, storage, and processing facilities for LLW & TRU waste awaiting disposal

Processing part of the "ORRLLW/TRU" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1942

Storage part of the "ORRLLW/TRU" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Includes a variety of facilities including, bunkers, buildings, casks, tanks, etc.				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TRUtrenchs	cask	1970	No	No	No	No
TRU	building	1980	No	No	No	No
MVST	tank (concrete)	0	Yes	No	No	No
LegacyLLW	concrete pad	0	No	No	No	No

Reporting Group Government, Site Structure: OakRidge

Country: United States of America Reporting Year: 2005

Facility: EMWMF

Description	Environmental Mangagement Waste Management Facility- CERCLA Remedial Action Facility

Disposal part of the "EMWMF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is modular			
Capacity - existing (m3)	310000	Capacity -planned (m3)	1700000
Depth (m)	0-10		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
design		2001	2001
construction		2001	2002
commissioning		2002	2002
operation		2002	2015
closure	Yes	2015	2033
institutional control	Yes	2015	2070

Facility: Hydrofract

Description	Past-practice of injecting grout (hydrofracture) in shale underlying ORNL from 1959-1983

Disposal part of the "Hydrofract" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No

Type	deep well injection

Depth (m)	100-300	
Host medium	sedimentary rock (consolidated clay)	

Phase	Estimate	Start Year	End Year
commissioning		1959	1959
operation		1959	1984
closure		2000	2004
institutional control		2004	

Reporting Group Government, Site Structure: OakRidge

Country: United States of America Reporting Year: 2005

Facility: OldBurial

Description	Solid Waste Storage Areas (Old Burial Grounds)

Disposal part of the "OldBurial" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	441000	Capacity -planned (m3)	441000
Depth (m)	0-10		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
operation		1945	1986

Facility: ORNL/IWMF

Description	Interim Waste Management Facility at ORNL - No longer in operation

Disposal part of the "ORNL/IWMF" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	5400	Capacity -planned (m3)	5400
Depth (m)	abovegrnd		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1986	1990
site selection		1986	1990
design		1986	1990
construction		1991	1991
commissioning		1991	1991
operation		1991	2001
closure	Yes	2002	2006
institutional control	Yes	2006	

Reporting Group Government, Site Data: OakRidge

Country: United States of America Reporting Year: 2005

Full Name: Oak Ridge Reservation, including Oak Ridge National Laboratory and East Tennessee Technology Park

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage ORRLLW/TRU	No	2438	0	0	0	0	100	0	0	No
TRU	Storage ORRLLW/TRU	Yes	55	0	0	0	0	100	0	0	No
LLW	Storage ORRLLW/TRU	No	3316	0	0	0	0	100	0	0	No
LLW	Storage ORRLLW/TRU	Yes	3820	0	0	0	0	100	0	0	No
LLW	Disposal EMWMF	No	239787	0	0	0	0	0	100	0	No
LLW	Disposal Hydrofract	No	17300	0	0	0	10	90	0	0	Yes
LLW	Disposal OldBurial	Yes	441000	0	0	0	10	90	0	0	Yes
LLW	Disposal ORNL/IWMF	Yes	3637	0	0	0	0	100	0	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Evaporation			same	
Incineration			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Solidification			same	
Stabilization			same	

Reporting Group Government, Site Structure: OCRWM

Country: United States of America Reporting Year: 2005

Full Name: Yucca Montain Project

License Holder(s) : US Department of Energy, Office of Civilian Radioactive Waste Management

The following list the waste management facilities that are located at this site.

Facility: Repository

Description	Geologic repository site investigation, currently at the Yucca Mountain site (capacity below is vol of HLW canisters planned to be disposed in the future)

Disposal part of the "Repository" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	Yes	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	geological (cavern)		
Facility is non modular			
Capacity - existing (m3)	0	Capacity -planned (m3)	12300
Depth (m)	300		
Host medium	volcanic tuff		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1982	2001
site selection		2002	2002
design	Yes	2002	2007
construction	Yes	2011	2016
commissioning	Yes	2016	2017
operation	Yes	2017	

Comment #12168: Disposal Facility Repository Schedule

Assumed schedule dates based on best-achievable repository construction schedule as of 7/19/2006. Based on license application submittal to NRC in June 2008 with construction authorization in September 2011.

Reporting Group Government, Site Structure: OtherDOE

Country: United States of America Reporting Year: 2005

Full Name: All other US Department of Energy sites with rad processing facilities and/or ongoing remedial action

License Holder(s) : U.S. Department of Energy

The following list the waste management facilities that are located at this site.

Facility: Various

Description	Many DOE laboratory and cleanup sites have a variety of processing facilities with associated storage facilities for radioactive waste management

Processing part of the "Various" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1945

Storage part of the "Various" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Storage sufficient to support operations				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
LLWstore	building	1945	No	No	No	No
TRUstore	building	1970	No	No	No	No

Reporting Group Government, Site Data: OtherDOE

Country: United States of America Reporting Year: 2005

Full Name: All other US Department of Energy sites with rad processing facilities and/or ongoing remedial action

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage	No	61	0	0	0	0	100	0	0	No
LLW	Storage	No	38	0	0	0	10	10	80	0	Yes
LLW	Storage	Yes	733	0	0	0	10	10	80	0	Yes

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Deactivation (of Sodium)			decrease	
Filtration			decrease	
Size Reduction			decrease	
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			same	
Solidification			same	
Stabilization			decrease	

Reporting Group Government, Site Structure: Paducah

Country: United States of America Reporting Year: 2005

Full Name: Paducah Gaseous Diffusion Plant

License Holder(s) : U.S. Department of Energy, Paducah Site Office

U.S. Enrichment Corporation

The following list the waste management facilities that are located at this site.

Facility: Proc/Store

Description	Legacy waste processing and storage awaiting disposal

Processing part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1952

Storage part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Processing and storage pending disposal of waste resulting from operation of a gaseous diffusion plant and remedial action				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1952	No	No	No	No

Reporting Group Government, Site Data: Paducah

Country: United States of America Reporting Year: 2005

Full Name: Paducah Gaseous Diffusion Plant

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage	No	11	0	100	0	0	0	0	0	No
LLW	Storage	No	1741	0	100	0	0	0	0	0	No
LLW	Storage	Yes	81730	0	100	0	0	0	0	0	No

Comment #9906: Waste characteristics

The unprocessed waste is mixed waste hazardous and radioactive. Processed waste is just radioactive

Processing - Conditioning method(s)

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

Reporting Group Government, Site Structure: Portsmouth

Country: United States of America Reporting Year: 2005

Full Name: Portsmouth Gaseous Diffusion Plant

License Holder(s) : U.S. Department of Energy, Portsmouth Site Office

U.S. Enrichment Corporation

The following list the waste management facilities that are located at this site.

Facility: Proc/Store

Description	Legacy waste processing and storage awaiting disposal

Processing part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	conditioning
Year opened	1954

Storage part of the "Proc/Store" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Processing and storage pending disposal of waste resulting from operation of a gaseous diffusion plant and remedial action				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Storage	building	1954	No	No	No	No

Reporting Group Government, Site Data: Portsmouth

Country: United States of America Reporting Year: 2005

Full Name: Portsmouth Gaseous Diffusion Plant

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage	No	821	0	100	0	0	0	0	0	No
LLW	Storage	Yes	857	0	100	0	0	0	0	0	No

Comment #9907: Waste characteristics

The unprocessed waste is mixed waste hazardous and radioactive. Processed waste is just radioactive

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			increase	

Reporting Group Government, Site Structure: SRS

Country: United States of America Reporting Year: 2005

Full Name: Savannah River Site

License Holder(s) : U.S. Department of Energy, Savannah River Operations Office (South Carolina regulates mixed waste)

The following list the waste management facilities that are located at this site.

Facility: DWPF

Description	Defense Waste Processing Facility (vitrification); also facilities for evaporation and pretreatment for vitrification.

Processing part of the "DWPF" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1996

Facility: E-AreaFac

Description	Interim storage of LLW and TRU awaiting disposal; LLW treatment and conditioning facilities, including mixed waste processing

Processing part of the "E-AreaFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1974

Storage part of the "E-AreaFac" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity	Modular buildings and pads are used for TRU waste (pads 1-13 covered with earth; pads 14-19 have weather enclosures) and mixed LLW storage pending disposal; the				

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
MLLWstore	building	1986	No	No	Yes	No
TRUcov_pad	building	1992	No	No	Yes	No
TRUpads	concrete pad	1974	No	No	No	No

Reporting Group Government, Site Structure: SRS

Country: United States of America Reporting Year: 2005

Facility: HLW Tanks

Description	Fand H Area Tank Farms with HLW; including 3 evaporators processing tank supernate and the Effluent Treatment Facility

Processing part of the "HLW Tanks" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment
Year opened	1980

Storage part of the "HLW Tanks" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Capacity	49 carbon steel underground tanks totalling over 56 million gallons capacity: 12 Type I @750,000 gallons; 4 Type II @ 1 million gallons; 27 Type III at 1.3 million gallons; 8 Type IV @1.3 million gallons.

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
Type-I	tank (stainless steel)	1951	No	No	No	No
Type-II	tank (stainless steel)	1955	No	No	No	No
Type-III	tank (stainless steel)	1967	No	No	No	No
Type-IV	tank (stainless steel)	1953	Yes	No	No	No

Comment #7249: SRS HLW Tanks

2 tanks closed (Type IV) as of this date. Tank types I, II, and IV will be emptied and retired ASAP. Type III tanks have state-of-the-art designs and will close last

Facility: GlassStore

Description	Glass Waste Storage Buildings for interim storage of vitirified HLW awaiting shipment to repository

Storage part of the "GlassStore" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	Yes	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Capacity	GWSB#1 capacity is 2,139 canisters GWSB#2 under construction will increase capacity by an additional 2,340 canisters

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
GWSB#1	building	1996	No	No	Yes	No

Reporting Group Government, Site Structure: SRS

Country: United States of America Reporting Year: 2005

Facility: BurialGrd

Description	Includes the Old Radioactive Waste Burial Ground (1952-1972) and Low-Level Radioactive Waste Disposal Facility (1973-1995)

Disposal part of the "BurialGrd" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	677000	Capacity -planned (m3)	677000
Depth (m)	0-10		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
commissioning		1952	1952
operation		1952	1994
closure		1995	1995
institutional control		1995	

Facility: E-AreaDisp

Description	E-Area Disposal Trenches and Vaults

Disposal part of the "E-AreaDisp" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	trench(es)		
Facility is non modular			
Capacity - existing (m3)	245600	Capacity -planned (m3)	245600
Depth (m)	6		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
commissioning		1995	1995
operation	Yes	1995	2050
closure	Yes	2050	2050
institutional control	Yes	2050	

Reporting Group Government, Site Structure: SRS

Country: United States of America Reporting Year: 2005

Facility: Saltstone

Description	Stabilized (grouted) low-activity fraction disposal from HLW processing

Disposal part of the "Saltstone" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	Yes	Yes	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	773000	Capacity -planned (m3)	773000
Depth (m)	0		
Host medium	sedimentary (sand)		

Phase	Estimate	Start Year	End Year
commissioning		1990	1990
operation	Yes	1990	2025
closure	Yes	2025	2025
institutional control	Yes	2025	

Reporting Group Government, Site Data: SRS

Country: United States of America Reporting Year: 2005

Full Name: Savannah River Site

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage HLW Tanks	No	140000	0	0	0	0	100	0	0	No
HLW	Storage GlassStore	Yes	1460	0	0	0	0	100	0	0	No

Comment #7312: Vitrified HLW

Vitrified HLW is in 1,969 canisters, based on a nominal 0.74 m3 per canister.

Class	Location Facility	Proc.	Volume (m3)	RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Storage E-AreaFac	No	7367	0	0	0	0	100	0	0	No
LLW	Storage E-AreaFac	No	301	0	0	0	0	100	0	0	No
LLW	Storage E-AreaFac	Yes	165	0	0	0	0	100	0	0	No
LLW	Disposal BurialGrd	No	677000	0	0	0	0	100	0	0	Yes
LLW	Disposal E-AreaDisp	Yes	238214	0	0	0	0	80	20	0	Yes
LLW	Disposal Saltstone	Yes	26647	0	0	0	0	100	0	0	No

Comment #7370: Savannah River Site

The volume reported for E-Area is inclusive of all the waste disposed in the LAW vaults, ILW vaults, and trenches (reported since 1988). No breakdown was available. Old Burial Grounds number is historically disposed waste pre-1992 as reported in IDB Rev 9.

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Compaction			same	
Decontamination			same	
Evaporation			same	
Incineration				Yes
Size Reduction	Yes			
Sludge washing			same	
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Stabilization			same	
Vitrification			same	

Reporting Group Government, Site Structure: WIPP

Country: United States of America Reporting Year: 2005

Full Name: Waste Isolation Pilot Plant

License Holder(s) : US Department of Energy, Carlsbad Field Office (license = certification by USEPA; State of New Mexico issues hazardous waste permit)

The following list the waste management facilities that are located at this site.

Facility: WIPP

Description	Waste Isolation Pilot Plant, geologic disposal facility for defense TRU Waste

Disposal part of the "WIPP" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	No	No	11e2 Byproduct Material	No	No
Disused/spent, sealed radioactive sources (SRS).				Yes	Yes
List SRS	No				

Type	rock cavern		
Facility is non modular			
Capacity - existing (m3)	175600	Capacity -planned (m3)	175600
Depth (m)	655		
Host medium	sedimentary rock (bedded salt)		

Phase	Estimate	Start Year	End Year
planning and/or concept assessment		1955	1974
site selection		1974	1974
design		1980	1982
construction		1982	1988
commissioning		1989	1998
operation		1999	2034
closure	Yes	2035	2039
institutional control	Yes	2040	2140

Reporting Group Government, Site Data: WIPP

Country: United States of America Reporting Year: 2005

Full Name: Waste Isolation Pilot Plant

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
TRU	Disposal	Yes	34887	0	0	0	0	100	0	0	No

Reporting Group Government, Site Structure: WSSRAP

Country: United States of America Reporting Year: 2005

Full Name: Weldon Spring Site Remedial Action Project

License Holder(s) : U.S. Department of Energy, Oak Ridge Operations Office (license=CERCLA ROD approved by USEPA)

The following list the waste management facilities that are located at this site.

Facility: 11e2 cell

Description	Disposal cell - mill tailing design; built for waste from remedial action of the Weldon Spring Site

Disposal part of the "11e2 cell" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	Yes	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	1120000	Capacity -planned (m3)	1120000
Depth (m)	0		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
design		1995	1997
construction		1997	1998
commissioning		1998	1998
operation		1998	2001
closure		1998	2002
institutional control		2003	

Reporting Group Government, Site Data: WSSRAP

Country: United States of America Reporting Year: 2005

Full Name: Weldon Spring Site Remedial Action Project

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Disposal	No	930000	0	0	0	0	0	100	0	No
11e2 Byproduct Material	Disposal	Yes	190000	0	0	0	0	0	100	0	No

Reporting Group Government, Site Structure: WVDP

Country: United States of America Reporting Year: 2005

Full Name: West Valley Demonstration Project, formerly West Valley Nuclear Services

License Holder(s) : State of New York

U.S. Department of Energy, West Valley Project Office (USNRC License)

The following list the waste management facilities that are located at this site.

Facility: TRU&LLW

Description	Processing = remote handling facility Storage = LLW and TRU Storage areas

Processing part of the "TRU&LLW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Type	treatment, conditioning
Year opened	1966

Storage part of the "TRU&LLW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	Yes	Yes
LLW	Yes	Yes	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				
Capacity					

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
TRUstore	building	1982	No	No	No	No
LLWstore	building	1982	No	No	No	No

Reporting Group Government, Site Structure: WVDP

Country: United States of America Reporting Year: 2005

Facility: HLW

Description	Vitrified HLW storage

Storage part of the "HLW" facility

The following shows storage status for waste classes, and SRS.

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	Yes	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	No	No
SRS	No	No			
List SRS?	No				

Capacity	2 HLW storage tanks, are now empty but have some residual contamination; vitrified HLW canisters are stored in a former process cell awaiting shipment to a repository

Types of Storage Units

Unit Name	Type	Year Opened	Closed?	Full?	Modular ?	Contains SRS?
HLWtanks	tank (stainless steel)	1966	Yes	No	No	No
glass	building	1966	No	No	No	No

Reporting Group Government, Site Data: WVDP

Country: United States of America Reporting Year: 2005

Full Name: West Valley Demonstration Project, formerly West Valley Nuclear Services

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
HLW	Storage	Yes	229	0	0	100	0	0	0	0	No
TRU	Storage	No	652	0	0	0	0	0	100	0	No

Comment #7310: Waste source

The TRU waste in storage resulted from D&D of a commercial reprocessing plant (reported as D&D, not reprocessing in this cycle)

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
LLW	Storage TRU&LLW	No	122	0	0	0	0	0	100	0	No
LLW	Storage TRU&LLW	Yes	13315	0	0	0	0	0	100	0	No

Processing - Treatment method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Wastewater Treatment			same	

Processing - Conditioning method(s)

Method	Status			
	Planned	R&D program	Current practice method use over the last 5 years	Past Practice
Containerization			increase	
Stabilization	Yes			
Vitrification				Yes

Reporting Group OtherGovt, Site Structure: NFSS

Country: United States of America Reporting Year: 2005

Full Name: Niagara Falls Storage Site

License Holder(s) : U.S. Army Corps of Engineers

The following list the waste management facilities that are located at this site.

Facility: 11e2

Description	Disposal site for 11e2 material

Disposal part of the "11e2" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
HLW	No	No	TRU	No	No
LLW	No	No	11e2 Byproduct Material	Yes	No
Disused/spent, sealed radioactive sources (SRS).				No	No
List SRS	No				

Type	engineered surface		
Facility is non modular			
Capacity - existing (m3)	195000	Capacity -planned (m3)	195000
Depth (m)	0		
Host medium	sedimentary (other)		

Phase	Estimate	Start Year	End Year
construction		1982	1982
commissioning		1982	1982
operation		1982	1986
closure		1986	

Reporting Group OtherGovt, Site Data: NFSS

Country: United States of America Reporting Year: 2005

Full Name: Niagara Falls Storage Site

Inventory Reporting Date: December 2005 Waste Matrix: USDOE

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
11e2 Byproduct Material	Disposal	No	195000	0	0	0	0	0	100	0	No

Reporting Group PastPract, Site Structure: Atlantic

Country: United States of America Reporting Year: 2005

Full Name: Altantic Ocean disposal

License Holder(s) : none - past practice

The following list the waste management facilities that are located at this site.

Facility: SeaDispose

Description	Waste was dumped at sea at 11 sites in the Atlantic Ocean (Northern Hemisphere), including the Gulf of New Mexico. A total of 34,282 containers and 2.94E+06 GBq. (See TECDOC-1105 in the IAEA reading room)

Disposal part of the "SeaDispose" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Ocean-disposed	Yes	No			
Disused/spent, sealed radioactive sources (SRS).				No	No

Type	sea dumping (deep sea disposal)

Depth (m)	11-5289	
Host medium	unknown (site not selected)	

Phase	Estimate	Start Year	End Year
operation		1949	1967

Reporting Group PastPract, Site Data: Atlantic

Country: United States of America Reporting Year: 2005

Full Name: Altantic Ocean disposal

Inventory Reporting Date: December 2005 Waste Matrix: Past

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

Class	Location	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Ocean-disposed	Disposal	Yes	8600	0	0	0	0	0	0	100	Yes

Comment #7277: Atlantic Ocean Disposal Volumes

Between 1949 and 1967 over 34,000 containers were reported disposed. Most waste was put into a cement matrix in steel drums (210 liter or 300 liter). Waste volume information is not cited in the available references, so an assumption of 0.25 cubic meters/drum or 8,600 m3. This volume has significant uncertainty.

Reporting Group PastPract, Site Structure: Pacific

Country: United States of America Reporting Year: 2005

Full Name: Pacific Ocean disposal

License Holder(s) : none - past practice

The following list the waste management facilities that are located at this site.

Facility: SeaDispose

Description	Waste was dumped at 18 sites in the Pacific Ocean (Northern Hemisphere). A total of 56,261 containers and 5.54E+05 GBq were disposed. (See IAEA TECDOC 1105 link in reading room)

Disposal part of the "SeaDispose" facility

The following shows disposal status for waste classes, and SRS

Waste Class	Actual	Planned	Waste Class	Actual	Planned
Ocean-disposed	Yes	No			
Disused/spent, sealed radioactive sources (SRS).				No	No

Type	sea dumping (sea bed disposal)

Depth (m)	896-5487	
Host medium	unknown (site not selected)	

Phase	Estimate	Start Year	End Year
operation		1946	1962

Reporting Group PastPract, Site Data: Pacific

Country: United States of America Reporting Year: 2005

Full Name: Pacific Ocean disposal

Inventory Reporting Date: December 2005 Waste Matrix: Past

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

Class	Location Facility	Proc.	Volume (m3)	Distribution in %							
				RO	FF FE	RP	NA	DF	DC RE	ND	Est
Ocean-disposed	Disposal SeaDispose	Yes	14000	0	0	0	0	0	0	100	Yes

Comment #7278: Pacific Ocean Disposed Volumes

Between 1946 and 1970 over 56,000 containers were reported disposed. Most waste was put into a cement matrix in steel drums (210 liter or 300 liter). Waste volume information is not cited in the available references, so an assumption of 0.25 cubic meters/drum or 14,000 m3. This volume has significant uncertainty.

REGULATORS

Country: United States of America Reporting Year: 2005

Name	NRC
Full Name	US Nuclear Regulatory Commission
Division	Office of Federal and State Materials and Environmental Management Programs, Office of Nuclear Materials and Safeguards (Headquarters) and regional offices
City or Town	Washington, DC and regional offices throughout the USA

Comment #5615: Wastes that are regulated by the Regulator

Matrix USNRC - LLW Class A, Class B and Greater than Class C LLW and HLW. In special cases mandated by law, NRC regulates USDOE facilities, such as the HLW repository.

Name	EPA
Full Name	U.S. Environmental Protection Agency
Division	Headquarters: Office of Radiation and Indoor Air, Office of Solid Waste, and regional offices
City or Town	Washington DC and regional offices throughout the USA

Comment #5613: Wastes that are regulated by the Regulator

The EPA regulates the hazardous portion of mixed waste. It is possible that mixed waste can be found in any of these classes: Matrix USDOE - HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C, and HLW. Most mixed waste is in the USDOE LLW and TRU waste classes. By law, the EPA is a regulator of the Waste Isolation Pilot Plant (WIPP) under long-term disposal standards. EPA mixed waste authority under the Resource Conservation and Recovery Act may also be delegated to States in some instances.

Name	States
Full Name	50 State government agencies throughout the USA
Division	Various State Radiation Protection Agencies for NRC Agreement State (33 states) authority Various State Environmental Departments for hazardous waste (RCRA) Authority and permitting under environmental statutes
City or Town	Various Locations

Comment #5614: Wastes that are regulated by the Regulator

Certain states are considered Agreement States by USNRC and have regulatory authority over certain waste management facilities These would fall into Matrix USNRC - Class A LLW, Class B LLW, Class C LLW. States also have authority for hazardous waste regulation as delegated by the USEPA. In these instances, mixed wastes that primarily fall into Matrix USDOE - LLW and TRU waste.

Name	DOE
Full Name	United States Department of Energy
Division	Office of Health, Safety, and Security, and field locations
City or Town	Washington, DC

Comment #5616: Wastes that are regulated by the Regulator

The USDOE internally regulates its facilities under AEA authority. Wastes are in Matrix USDOE - 11e2, HLW, LLW, TRU. Some waste management facilities by law fall under outside regulators, e.g. EPA or NRC.

REGULATORS

Country: United States of America Reporting Year: 2005

Name	DOT
Full Name	U.S. Department of Transportation
Division	Headquarters - regulate transportation of radioactive waste
City or Town	Washington, DC

Comment #5612: Wastes that are regulated by the Regulator

Transportation of waste from classes: Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW is regulated.

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	DOEO435.1	
Title or Name	Radioactive Waste Management US Department of Energy Order (Manual and Implementation Guide)	
Reference Number	DOE O 435.1 (DOE M 435.1-1 DOE G 435.1-1)	
Date Promulgated or Proclaimed	1999-07-09	Regulation

Comment #5617: Wastes that are regulated by the Regulation

Matrix USDOE - HLW, LLW, TRU

Name	NWPA	
Title or Name	Nuclear Waste Policy Act of 1982, as amended in 1987, Public Law 97-425 Implementing Regulations: Title 10, Code of Federal Regulations, Parts 53, 60, and 960-962 also Title 40, Code of Federal Regulations, Part 191	
Reference Number	Title 42, U.S. Code, Sect. 10101 et seq.	
Date Promulgated or Proclaimed	1983-01-07	Law

Comment #5618: Wastes that are regulated by the Law

Matrix USDOE - HLW; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	AEA	
Title or Name	Atomic Energy Act of 1954 as amended Implementing Regulations: Title 10, Code of Federal Regulations, Parts 20, 39, 60-61, 71, 100, 762, 960. and 962 also Title 40, Code of Federal Regulations, Parts 190-194	
Reference Number	Title 42, U.S. Code, Sections 2011-2259	
Date Promulgated or Proclaimed	1954-01-01	Law

Comment #5619: Wastes that are regulated by the Law

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	UMTRCA	
Title or Name	Uranium Mill Tailings Radiation Control Act of 1978, Public Law 95-604 Implementing Regulation: Title 40, Code of Federal Regulations, Part 192	
Reference Number	Title 42, U.S. Code, Sect. 7901-7942	
Date Promulgated or Proclaimed	1978-11-08	Law

Comment #5620: Wastes that are regulated by the Law

Matrix USDOE - 11e2

REGULATIONS / LAWS

Country: United States of America | Reporting Year: 2005

Name	CERCLA	
Title or Name	Comprehensive Environmental Response, Compensation, and Liability Act as amended by the Superfund Amendments and Reauthorization Act of 1984 Implementing Regulations: Title 40, Code of Federal Regulations, Parts 300-372	
Reference Number	Title 42, U.S. Code, Sect. 9601-9675	
Date Promulgated or Proclaimed	1980-01-01	Law

Comment #5621: Wastes that are regulated by the Law

CERCLA wastes are derived from remediation projects. They may include waste in any of these waste classes: Matrix USDOE - 11e2, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW. HLW is excluded because it is unlikely that any would be generated from CERCLA cleanup projects.

Name	RCRA	
Title or Name	Resource Conservation and Recovery Act. Public Law 94-580 as amended by the Hazardous and Solid Waste Amendment of 1984 (public law 98-616) Implementing Regulations: Title 40 Code of Federal Regulations, Parts 240-257, 260-280	
Reference Number	Title 42, U.S. Code, Sect. 6901-6991i	
Date Promulgated or Proclaimed	1976-01-01	Law

Comment #5622: Wastes that are regulated by the Law

Radioactive wastes that contain hazardous consituents as defined under the RCRA regulations. These may fall into any of the classes: Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	FFCA	
Title or Name	Federal Facilities Compliance Act	
Reference Number	Public Law 102-386	
Date Promulgated or Proclaimed	1992-10-01	Law

Comment #5623: Wastes that are regulated by the Law

If wastes are mixed hazardous waste and radioactive waste from federal facilities. Waste classes may be USDOE - HLW, LLW, TRU

Name	TSCA	
Title or Name	Toxic Substances Control Act, Public Law 94-469 including Asbestos Hazard Emergency Act, Public Law 99-519 Implementing Regulations: Title 40, Code of Federal Regulations, 1500-1508	
Reference Number	Title 15, U.S. Code, Sections 2601-2654	
Date Promulgated or Proclaimed	1976-10-11	Law

Comment #5624: Wastes that are regulated by the Law

Any of the following radioactive classes if they include hazardous waste consitutents regulated under this law: Matrix USDOE - HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	NEPA	
Title or Name	National Environmental Policy Act, Public Law 91-190	
Reference Number	Title 42, U.S. Code, Section 4321-4370a	
Date Promulgated or Proclaimed	1970-01-01	Law

Comment #123: DOE Implementing Order

DOE Order 451.1B dated 10/26/2000

Comment #5625: Waste Facilities Must Comply With the Law

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	LLRWPA	
Title or Name	Low-level Radioactive Waste Policy Act, Public Law 96-573, as amended includes Amendments Act of 1985 and Amendments Act of 1995 includes consent of Congress for LLW compacts	
Reference Number	Title 42, US Code, Section 2021	
Date Promulgated or Proclaimed	1980-12-22	Law

Comment #5626: Wastes that are regulated by the Law

Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	10CFR61	
Title or Name	Licensing requirements for land disposal of radioactive waste	
Reference Number	Title 10, Code of Federal Reglations, Part 61	
Date Promulgated or Proclaimed	1960-01-01	Regulation

Comment #122: Agreement State Regulations

Each agreement state has enabling regulations that must be equivalent or more restrictive than those promulgated by USNRC.

Comment #5627: Wastes that are regulated by the Regulation

Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW

Name	40CFR191	
Title or Name	Disposal Standards for Long-Lived Waste	
Reference Number	Title 40, Code of Federal Reglations, Part 191	
Date Promulgated or Proclaimed	1992-01-01	Regulation

Comment #5628: Wastes that are regulated by the Regulation

Matrix USDOE - HLW, TRU

Name	WIPP-LWA	
Title or Name	Waste Isolation Pilot Plant Land Withdrawal Act	
Reference Number	Public Law 102-549	
Date Promulgated or Proclaimed	1992-10-01	Law

Comment #5629: Wastes that are regulated by the Law

Matrix USDOE - TRU

Name	10CFR830	
Title or Name	Nuclear Safety Management	
Reference Number	Title 10, Code of Federal Regulations, Part 830	
Date Promulgated or Proclaimed	2001-01-01	Regulation

Comment #124: Additional DOE Orders related to Nuclear Safety

DOE Order 5480.21, Unreviewed Safety Questions 12/24/1991
DOE Order 5480.22, Change 2, Technical Safety Requirements, 1/23/1996
DOE Order 5480.23, Change 1, Nuclear Safety Analysis Reports, 3/10/1994

Comment #5630: Waste Facilities Must Comply With the Regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO5400.5	
Title or Name	Radiation Protection of the Public and the Environment	
Reference Number	DOE Order 5400.5, Chg. 2	
Date Promulgated or Proclaimed	1993-01-07	Regulation

Comment #5631: Waste Facilities Must Comply With the Regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	DOE5480.19	
Title or Name	Conduct of Operations Requirements for Nuclear Facilities	
Reference Number	DOE Order 5480.19, Change 2	
Date Promulgated or Proclaimed	2001-10-23	Regulation

Comment #5632: Wastes Facilities Must Comply With This Regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOE5480.20	
Title or Name	Personnel Selection, Qualification, and Training Requirements	
Reference Number	DOE Order 5480.20A	
Date Promulgated or Proclaimed	2001-07-12	Regulation

Comment #5634: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO151.1B	
Title or Name	Comprehensive Emergency Management System	
Reference Number	DOE Order 151.1C	
Date Promulgated or Proclaimed	2005-11-02	Regulation

Comment #5635: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO231.1A	
Title or Name	Environment, Safety, and Health Reporting	
Reference Number	DOE Order 231.1, Change 1	
Date Promulgated or Proclaimed	2004-09-09	Regulation

Comment #5636: Wastes facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO430.1B	
Title or Name	Life Cycle Asset Management	
Reference Number	DOE Order 430.1A	
Date Promulgated or Proclaimed	2003-09-24	Regulation

Comment #5638: Wastes facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	DOE433.1	
Title or Name	Maintenance Management Program	
Reference Number	DOE Order 433.1	
Date Promulgated or Proclaimed	2001-06-01	Regulation

Comment #5639: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	HMTA	
Title or Name	Hazardous Materials Transportation Act, Public Law 101-416 Hazardous Materials Transportation Uniform Safety Act of 1990, Public Law 101-615 Implementing Regulations: Title 49, Code of Federal Regulations, Parts 100-199	
Reference Number	Title 49, U.S. Code, Sect. 1801-1812, 5101-5103	
Date Promulgated or Proclaimed	1990-11-16	Law

Comment #5640: Application of the Law

Covers hazardous material transport, which includes these wastes:

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	DOEO460.1B	
Title or Name	Packaging and Transportation Safety	
Reference Number	DOE Order 460.1A	
Date Promulgated or Proclaimed	2004-04-26	Regulation

Comment #5641: Wastes that are regulated

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	10CFR835	
Title or Name	Occupational Radiation Protection	
Reference Number	Title 10, Code of Federal Regulations, Part 835	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #125: Other DOE order on Rad Protection

DOE Order 5480.4, Change 4, 1/7/1993 was in effect when 10CFR835 was promulgated

Comment #5642: Wastes that are regulated

Matrix USDOE - 11e2, HLW, LLW, TRU

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	DOE470.2B	
Title or Name	Security and Emergency Management Independent Oversight and Performance Assurance Program	
Reference Number	DOE Order 470.2B	
Date Promulgated or Proclaimed	2000-03-01	Regulation

Comment #5643: Wastes facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO414.1C	
Title or Name	Quality Assurance (guidance also)	
Reference Number	DOE Order 414.1C	
Date Promulgated or Proclaimed	2005-06-17	Regulation

Comment #5644: Wastes facilities must compy with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO360.1B	
Title or Name	Federal Employee Training	
Reference Number	DOE Order 360.1B	
Date Promulgated or Proclaimed	2001-10-11	Regulation

Comment #5647: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO425.1C	
Title or Name	Startup and Restart of Nuclear Facilities	
Reference Number	DOE Order 425.1C	
Date Promulgated or Proclaimed	2003-03-13	Regulation

Comment #5648: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOE440.1A	
Title or Name	Worker Protection Management for DOE Federal and Contractor Employees	
Reference Number	DOE Order 440.1A, Change 3	
Date Promulgated or Proclaimed	1998-03-27	Regulation

Comment #5649: Wastes faciliteis must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	DOEO420.1B	
Title or Name	Facility Safety	
Reference Number	DOE Order 420.1B	
Date Promulgated or Proclaimed	2005-12-22	Regulation

Comment #5650: Waste facilities must comply with this regulation

Matrix USDOE - 11e2, HLW, LLW, TRU

Name	10CFR960	
Title or Name	General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories	
Reference Number	Title 10, Code of Federal Regulations, Part 960	
Date Promulgated or Proclaimed	1999-01-01	Regulation

Comment #5651: Wastes that are regulated

Matrix USDOE - HLW and USNRC -HLW

Name	10CFR961	
Title or Name	Standard contract for disposal of spent nuclear fuel and high level waste	
Reference Number	Title 10, Code of Federal Regulations, Part 961	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5652: Wastes that are regulated

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	10CFR962	
Title or Name	Byproduct Material	
Reference Number	Title 10, Code of Federal Regulations, Part 962	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5653: Wastes that are regulated

Matrix USDOE - 11e2

Name	10CFR51	
Title or Name	Environmental protection regulation for domestic licensing and related regulatory functions	
Reference Number	Title 10, Code of Federal Regulations, Part 51	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5654: Wastes that are regulated

Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	10CFR60	
Title or Name	Disposal of high-level radioactive wastes in geologic repositories	
Reference Number	Title 10, Code of Federal Regulations, Part 60	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5655: Wastes that are regulated

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	10CFR62	
Title or Name	Criteria and procedures for emergency accesss to non-federal and regional low-level waste disposal facilities	
Reference Number	Title 10, Code of Federal Regulations, Part 62	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5656: Wastes that are regulated

Matrix USNRC - Class A LLW, Class B LLW, and Class C LLW

Name	10CFR71	
Title or Name	Packaging and transportation of radioactive waste	
Reference Number	Title 10, Code of Federal Regulations, Part 71	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5657: Wastes that are regulated

Applies to transportation of waste

Matrix USDOE - HLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	10CFR72	
Title or Name	Licensing requirements for the independent storage of spent nuclear fuel and high level radioactive waste	
Reference Number	Title 10, Code of Federal Regulations, Part 72	
Date Promulgated or Proclaimed	1990-01-01	Regulation

Comment #5658: Wastes that are regulated

Matrix USNRC - HLW

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	CAA	
Title or Name	Clean Air Act (Implementing Regulations: Title 40, Code of Federal Regulations, Parts 50-87)	
Reference Number	Title 33, U.S. Code, Sect. 7401-7642	
Date Promulgated or Proclaimed	1970-01-01	Law

Comment #5659: Waste Facilities Must Comply With the Law

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	CWA	
Title or Name	Clean Water Act Implementing Regulations, Title 40, Code of Federal Regulations, Parts 100-136, 230-233, 400-471) Implementing Regulations, Title 33, Code of Federal Regulations, Parts 320, 323, 325, 328 and 330	
Reference Number	Title 33, U.S. Code, Sect. 1251-1387	
Date Promulgated or Proclaimed	1972-01-01	Law

Comment #5660: Waste Facilities Must Comply With the Law

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	SDWA	
Title or Name	Safe Drinking Water Act Implementing Regulations: Title 40, Code of Federal Regulations, Parts 141-149	
Reference Number	Title 42, U.S. Code, Sect. 300f-300j-11	
Date Promulgated or Proclaimed	1974-01-01	Law

Comment #5661: Waste Facilities Must Comply With the Law

Matrix USDOE - 11e2, HLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	OSHA	
Title or Name	Occupational Safety and Health Act Implementing Regulations: Title 29, Code of Federal Regulations, Parts 1990-19990	
Reference Number	Title 29, U.S. Code, Sect. 651 et seq.	
Date Promulgated or Proclaimed	1970-01-01	Law

Comment #5662: Waste Facilities Must Comply With the Law

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	EnergyReor	
Title or Name	Energy Reorganization Act of 1974, Public Law 93-438	
Reference Number	Title 42, US Code, Sections 5801-5891	
Date Promulgated or Proclaimed	1974-10-11	Law

Comment #5663: Waste facilities must comply with the law

Matrix USDOE - 11e2, HLW, LLW, TRU; Matrix USNRC - Class A LLW, Class B LLW, Class C LLW, Greater than Class C LLW, HLW

Name	WVDPA	
Title or Name	West Valley Demonstration Project Act, Public Law 96-368	
Reference Number	Title 42, US Code, Section 2021a	
Date Promulgated or Proclaimed	1980-10-01	Law

Comment #5664: Wastes that are regulated by the Law

The West Valley facility must comply with the law

Matrix USDOE - HLW, LLW, TRU

Name	FFCAct	
Title or Name	Federal Facilities Compliance Act of 1992, Public Law 102-386	
Reference Number	Title 42, US Code, Section 6961	
Date Promulgated or Proclaimed	1992-01-01	Law

Comment #5665: Federal wastes facilities must comply with the Law

Applies to federal government facilities with mixed hazardous and radioactive waste. Waste may fall into these radioactive classes:
Matrix USDOE - HLW, LLW, TRU

Name	EnPolAct	
Title or Name	Energy Policy Act of 1992	
Reference Number	Title 42, United States Code, Part 2296	
Date Promulgated or Proclaimed	1992-01-01	Law

Comment #5666: Wastes that fall under this Law

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	10CFR963	
Title or Name	Amended Yucca Mountain Site Suitabiilty Guidelines	
Reference Number	Title 10, Code of Federal Regulations, Subpart 963	
Date Promulgated or Proclaimed	2001-11-14	Regulation

Comment #5667: Application of the regulation

Yucca Mountain site is subject to this regulation.

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	40CFR197	
Title or Name	Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada	
Reference Number	Title 40, Code of Federal Regulations, Part 197	
Date Promulgated or Proclaimed	1998-01-01	Regulation

Comment #5668: Application of this regulation

Yucca Mountain site

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	10CFR63	
Title or Name	Disposal of high-level radioactive waste in a geologic repository at Yucca Mountain. Nevada (licensing regulations)	
Reference Number	Title 10, Code of Federal Regulations, Part 63	
Date Promulgated or Proclaimed	2000-01-01	Regulation

Comment #5669: Application of this regulation

Yucca Mountain site

Matrix USDOE - HLW; Matrix USNRC - HLW

Name	40CFR194	
Title or Name	Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations	
Reference Number	Title 40, Code of Federal Regulations, Part 191	
Date Promulgated or Proclaimed	1996-04-09	Regulation

Comment #7217: Application of this regulation

Waste Isolation Pilot Plant

Matrix DOE: TRU waste

REGULATIONS / LAWS

Country: United States of America Reporting Year: 2005

Name	ENPA05	
Title or Name	Energy Policy Act of 2005	
Reference Number	Public Law 109-58	
Date Promulgated or Proclaimed	2005-08-08	Law

MILESTONES

Country: United States of America Reporting Year: 2005

Start Year or Reference Year:	1942	End Year	1945
Description of Milestone			
Manhattan Project creates radioactive waste at several sites in the USA			

Start Year or Reference Year:	1943	End Year	
Description of Milestone			
Chemical research activites begin at X-10 plant, predecessor to Oak Ridge National Laboratory			

Start Year or Reference Year:	1944	End Year	
Description of Milestone			
Waste operations begin at Hanford Site. Over the ensuing decades millions of gallons of high-level waste will be generated and stored pending future treatment and conditioning and burial grounds continue to dispose of solid radioactive waste.			

Start Year or Reference Year:	1946	End Year	1975
Description of Milestone			
Atomic Energy Commission established to administer nuclear energy programs			

Start Year or Reference Year:	1952	End Year	
Description of Milestone			
Waste management, including low-level waste disposal and storage of high-level waste, begins at Savannah River Site continuing to the present			

Start Year or Reference Year:	1956	End Year	
Description of Milestone			
The National Academy of Sciences recommends salt as a geologic disposal media			

Start Year or Reference Year:	1957	End Year	
Description of Milestone			
The National Academy of Sciences concludes radioactive waste could be safely disposed in a variety of geologic media within the USA			

Start Year or Reference Year:	1963	End Year	
Description of Milestone			
Idaho Chemical Processing Plant begins to calcine high-level waste into a dry granular powder for interim storage			

Start Year or Reference Year:	1968	End Year	1983
Description of Milestone			
Cesium and strontium are separated from Hanford high-level waste and made into capsules for storage and reuse			

Start Year or Reference Year:	1970	End Year	
Description of Milestone			
Congress enacts legislation requiring environmental impact analysis for all major federal actions, including waste management projects, under the National Environmental Policy Act. The Clean Air Act and the Occupational Safety and Health Act become the first of several environmental laws impacting waste operations			

Start Year or Reference Year:	1970	End Year	1972
Description of Milestone			
The Atomic Energy Commission proposes salt deposits near Lyons, Kansas, for permanent disposal of radioactive waste. In just two years the project was abandoned due to technical and political issues.			

MILESTONES

Country: United States of America — Reporting Year: 2005

Start Year or Reference Year:	1970	End Year	
Description of Milestone			
The Atomic Energy Commission begins to classify and separately manage long-lived transuranic waste from low-level waste			

Start Year or Reference Year:	1974	End Year	
Description of Milestone			
The Atomic Energy Commission chooses a site in southeast New Mexico near Carlsbad for exploratory repository work.			

Start Year or Reference Year:	1975	End Year	
Description of Milestone			
A presidential decision is made not to reprocess commercial spent nuclear fuel in favor of a once-through fuel cycle			

Start Year or Reference Year:	1975	End Year	
Description of Milestone			
The Atomic Energy Commission is disbanded. In its place are created the U.S. Nuclear Regulatory Commission with regulatory jurisdiction over US commercial nuclear power and the Energy Research and Development Administration which manages the government's nuclear complex.			

Start Year or Reference Year:	1975	End Year	
Description of Milestone			
The Resource Conservation and Recovery Act and Toxic Substances Control Act, two environmental statutes dealing with hazardous waste, become law, having significant impacts on radioactive waste management in the USA.			

Start Year or Reference Year:	1977	End Year	
Description of Milestone			
The U.S. Department of Energy, a cabinet level agency, is formed from the Energy Research and Development Administration.			

Start Year or Reference Year:	1978	End Year	
Description of Milestone			
Congress gives authority to the Department of Energy for stabilization and control of inactive uranium mill tailing sites under the Uranium Mill Tailing Radiation Control Act.			

Start Year or Reference Year:	1979	End Year	
Description of Milestone			
Congress authorizes the Waste Isolation Pilot Plant, near Carlsbad, New Mexico, to demonstrate the safe disposal of transuranic waste			

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
Congress enacts the Low-level Radioactive Waste Policy Act to promote commercial low-level waste disposal compacts for regional disposal.			

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
Final Environmental Impact Statement on Management of Commercially Generated Radioactive Waste is issued			

MILESTONES

Country: United States of America Reporting Year: 2005

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
Congress passes "superfund" legislation, the Comprehensive Environmental Response, Compensation, and Liability Act, aimed at cleanup of hazardous, toxics and radioactive waste sites. The legislation creates a trust fund to finance investigation and cleanup of abandoned and uncontrolled hazardous waste sites.			

Start Year or Reference Year:	1980	End Year	
Description of Milestone			
Congress gives the Department of Energy responsibility for demonstrating high-level waste solidifcation at West Valley, New York, a former commercial reprocessing plant, under the West Valley Demonstration Project Act.			

Start Year or Reference Year:	1982	End Year	1983
Description of Milestone			
The Nuclear Waste Policy Act becomes law directing the Department of Energy to find and characterize a repository site for spent nuclear fuel and high-level waste			

Start Year or Reference Year:	1983	End Year	
Description of Milestone			
Nine potential repository sites are selected in 6 states in various geological media for further consideration.			

Start Year or Reference Year:	1983	End Year	1988
Description of Milestone			
Full construction begins at the Waste Isolation Pilot Plant after completion of initial shafts and exploratory characterization.			

Start Year or Reference Year:	1987	End Year	
Description of Milestone			
Congress directs the Department of Energy to investigate only the Yucca Mountain Site, Nevada, for a potential repository ending studies on the remaining 8 sites. Characterization studies begin.			

Start Year or Reference Year:	1988	End Year	
Description of Milestone			
Congress gives consent to 3 low-level waste compacts. Several other compacts are formed, but no new regional repositories have moved to construction, although several were proposed but political and technical issues were not overcome.			

Start Year or Reference Year:	1989	End Year	
Description of Milestone			
The Department of Energy creates the Environmental Restoration and Waste Management Program (later called Environmental Management) to focus agency efforts on cleanup of government legacy radioactive waste sites.			

Start Year or Reference Year:	1992	End Year	
Description of Milestone			
Congress enacts the Federal Facility Compliance Act, requiring the federal government agencies to submit plans for treatment of mixed hazardous and radioactive waste to state agencies and the Environmental Protection Agency.			

Start Year or Reference Year:	1996	End Year	1998
Description of Milestone			
The Department of Energy achieved its complex-wide waste reduction goal of reducing waste by 50% compared to its 1993 baseline between 1996 and 1998.			

MILESTONES

Country: United States of America Reporting Year: 2005

Start Year or Reference Year:	1996	End Year	
Description of Milestone			
Vitrification of high-level waste begins at Savannah River Site and West Valley Demonstration Project.			

Start Year or Reference Year:	1997	End Year	
Description of Milestone			
The Department of Energy initiates a sealed radioactive source acceptance program.			

Start Year or Reference Year:	1997	End Year	
Description of Milestone			
The Department of Energy releases its Final Waste Management Programmatic Environmental Impact Statement. Decisions resulting from this analysis covered high-level waste treatement, transuranic storage and disposal, low-level waste storage and disposal, and hazardous waste disposal.			

Start Year or Reference Year:	1998	End Year	
Description of Milestone			
DOE releases its viability assessment for the Yucca Mountain site investigations.			

Start Year or Reference Year:	1999	End Year	
Description of Milestone			
After completion of all regulatory and legal requirements, the Waste Isolation Pilot Plant geologic repository begins disposal of transuranic waste.			

Start Year or Reference Year:	2000	End Year	2004
Description of Milestone			
Construction begins in 2000 on Advanced Mixed Waste Treatment Facility designed to repackage and treat legacy transuranic waste at the Idaho National Engineering and Environmental Laboratory. Operation begins in 2003 and shipments to WIPP begin in 2004.			

Start Year or Reference Year:	2002	End Year	
Description of Milestone			
In July 2002, the U.S. Congress approved final legislation approving development of a geologic repository at Yucca Mountain. The legislation was then signed into law by President Bush.			

Start Year or Reference Year:	2003	End Year	
Description of Milestone			
The USA ratified the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management in April 2003. The US fully participated in the first review meeting held in November 2003.			

Start Year or Reference Year:	2004	End Year	
Description of Milestone			
License application submitteed for new LLW disposal facility serving the Texas Compact by Waste Control Specialists, LLC			

Start Year or Reference Year:	2005	End Year	
Description of Milestone			
Completed physical cleanup at Rocky Flats site			

Policies

Country: United States of America Reporting Year: 2005

National Systems

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

Comment #7187: US Policy

A discussion on US policy can be found in Section B.1 of the U.S. National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

Comment #12133: Policies National Systems-Policy

U.S. National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, DOE/EM-0654, Rev 1, U.S. Department of Energy, October 2005 (See reading room for Internet link)

Attachment #1056: U.S. National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, DOE/EM-0654, U.S. Department of Energy, May 2003 (See reading room for Internet link)

File name:

File type: PDF Document

Member State's Reference # 2003-01

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

Comment #7188: US Practices

A discussion on US practices can be found in Section B.4 of the U.S. National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The document is in the NEWMDB reading room.

	Requirements	(Yes;Partially;No)
	Insert each of the following phrases into the question. "Has your country... ...according to IAEA Safety Series No. 111-S-1". For example, "Has your country identified the parties involved in the different steps of radioactive waste management according to IAEA Safety Series No. 111-S-1?	
4	identified the parties involved in the different steps of radioactive waste management	Yes
5	specified a rational set of safety, radiological and environmental protection objectives	Yes
6	implemented a mechanism to identify existing and anticipated radioactive wastes	Yes
7	implemented controls over radioactive waste generation	Yes
8	identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale	Yes
9	taken into account interdependencies among all steps in radioactive waste generation and management	Yes
10	implemented appropriate research and development to support the operational and regulatory needs	Yes
11	implemented a funding structure and the allocation of resources that are essential for radioactive waste management	Yes
12	implemented formal mechanisms for disseminating information to the public and for public consultation	Yes

Responsibilities	(Complete;Incomplete)

Policies

Country: United States of America | **National Systems** | Reporting Year: 2005

Indicate whether or not the following responsibilities have been defined in your country according to IAEA Safety Series No. 111-S-1.

Member State Responsibility		
15	establish and implement a legal framework for the management of radioactive waste	Complete
16	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
17	define the responsibilities of waste generators and operators of waste management facilities	Complete
18	provide for adequate resources	Complete
Regulatory Body Responsibility		
20	enforce compliance with regulatory requirements	Complete
21	implement the licensing process	Complete
22	advise the government	Complete
Waste Generator and Operators of Waste Management Facilities Responsibility		
24	identify an acceptable destination for the radioactive waste	Complete
101	comply with legal requirements	Complete

	Activities	(Yes;Partially;No)
	To indicate the status for implementing the responsibility to "manage radioactive waste safely" in your country, please answer the question "Does your country..." by inserting the following phrases. For example, "Does your country perform safety and environmental impact assessments?	
30	perform safety and environmental impact assessments for radioactive waste management facilities	Yes
31	ensure adequate radiation protection for workers, the general public and the environment	Yes
32	ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps	Yes
33	establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal	Yes
34	establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste	Yes
35	provide surveillance and control of activities involving radioactive waste as required by the regulatory body	Yes
36	collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management	Yes
37	conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management	Yes

Comment #7189: Information Collected

Information collected (clarification): manifests of waste sent to disposal sites contain information regarding generation, processing, transport and disposal of radioactive waste. The MIMS system compiles commercial LLW data. The USDOE compiles information from its facilities, such as WIPP.

Clearance	(Yes;No)

Policies

Country: United States of America **National Systems** Reporting Year: 2005

115	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
116	Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?	Yes
117	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)?	No

Comment #9793: Policies National Systems-Clearance

The U.S. has regulations in place that allow case-by-case authorized limits for release of waste or material from radiation areas for disposal. These are successfully applied. However, the U.S. does not have clearance levels.

Disposal Facilities

Licensing (Yes - All;Yes - Some;No)

If any of the following are part of your disposal policy, indicate Yes - All if they apply to all facilities, indicate Yes - Some if the apply to only some of the facilities or indicate No if they are not part of your policy at all.

40	Environmental Assessment (EA)	Yes - All
41	Environmental Impact Statement (EIS)	Yes - All
42	Performance Assessment (PA)	Yes - All
43	Quality Assurance (QA)	Yes - All
44	Safety Assessment (SA)	Yes - All
46	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

Comment #7219: International Standards

USNRC and USDOE require strict adherence to QA programs. At present these standards do not implement ISO 9000. USNRC have considered how broader international standards in ISO 9000 could be applied within the USNRC 20 CFR Part 50 requirements. See the following link for USNRC staff paper on this topic: http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2003/secy2003-0117/2003-0117scy.html

Operation (Yes - All;Yes - Some;No)

47	Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?	Yes - All

Comment #7220: Waste Acceptance Requiremetns

Several documents on waste acceptance are included in the NEWMDB public reading room.

Post-Closure (Yes;No)

48	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
49	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

Policies

Country: United States of America **Disposal Facilities** Reporting Year: 2005

50	Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions?	Yes

If the use of active institutional controls is part of your Country's written policies, please indicate which of the following practices are either implemented or are being considered.

52	access restrictions	Yes
53	drainage and/or leachate collection system(s)	Yes
54	leachate treatment systems	Yes
55	environmental monitoring	Yes
56	facility monitoring	Yes
57	surveillance	Yes
58	plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility	Yes

Comment #108: Reference Long Term Stewardship Report

A Report to Congress on Long-Term Stewardship, DOE/EM-0563, January 2001
Consists of 2 volumes: a summary report and site summaries. Copies available from U.S. Department of Energy, Office of Legacy Management

Processing/Storage

	Policies/Procedures	(Yes;No)
	Does your country have written policies or written procedures for the following:	
60	waste sorting/segregation	No
61	waste minimization	Yes
62	waste storage	Yes
63	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
65	Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)	No

NOTE: The statement above implies wastes that require processing should not be placed into storage facilities (except for short-term, interim storage awaiting processing) in an unprocessed state for significant periods, where significant is defined by the regulatory body.

Comment #111: Recycling Policies

Executive Order 12780 Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy
Executive Order 13101 Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition

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

Comment #112: Question on centralized processing

The US has some commercial and governmental facilities that process/treat waste prior to disposal. These are assumed to meet the IAEA definition of centralized processing, although they may only process a small portion of wastes from throughout the nation.

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

Spent SRS

	Registration	(Yes;No)

Please indicate the types of registries used in your country for sealed radioactive sources (SRS) (please check all that apply)

71	**Is there a national level registry?**	Yes
72	If answer was yes, is the registry used only for disused/spent SRS?	No
74	**Are there regional-level registries (one or more)?**	Yes
75	If the answer was yes, are any registries used only for disused/spent SRS?	No
77	**Are there local-level registries (one or more)?**	Yes
102	If the answer was yes, are any registries used only for disused/spent SRS?	No

Comment #110: Sealed Sources Registrations

National: US Nuclear Regulatory Commission - National Sealed Source and Device Registry

Regional: US Department of Energy Offsite Sealed Source Recovery Program Registry

Local: Some US Department of Energy sites have local registries

	Procedures	(Yes;No)
78	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)

Does your Country have any agreements in place whereby spent sealed radioactive sources (SRS) are returned to their supplier by the user (check all options that apply)?

80	Government to Government agreements	No
81	Government - Supplier agreements	Yes
82	Supplier-User agreements	Yes
84	Do any agreements include suppliers that are outside of your Country?	No

	Release / Disposal	(Yes;No)
86	Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?	No
87	Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?	Yes
88	Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?	Yes

89	Has your Country implemented dedicated disposal facilities for spent SRS?	No
90	Does your Country have plans to implement dedicated disposal facilities for spent SRS?	No

Import-Export

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

Comment #160: Citations for import/export regulation and law

Title 10, Code of Federal Regulations, Part 110.1, Export and Import of Nuclear Equipment and Material
United States Code, Title 42, Chapter 23, Subchapter X, International Activities (Sections 2153, 2160, 2160c)
Atomic Energy Act of 1954

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

Liquid HLW

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

	Processing	(Yes - All;Yes - Some;No)
94	If your Country has high-level liquid wastes in storage, are there documented plans in place to process these liquids?	Yes - All

	Timeframe	(Yes - All;Yes - Some;No)
95	If your Country has high-level liquid wastes in storage, are there plans to have this waste be processed within a specified time frame?	Yes - All
96	If the answer to the previous question is Yes, what year is this processing planned to be completed (format = YYYY)	2035

UMMT

	Responsibility	(Yes;No)
97	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)

98	Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities?	Yes - Some

Comment #109: Decommissioning costs

Fees are collected from nuclear power utilities to cover life cycle costs including decommissioning of HLW repositories

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

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