

Site (Structure) : Rokkasho

Country: JAPAN

Reporting Year: 2004

Full Name: Japan Nuclear Fuel Limited ::
 - Uranium Enrichment Plant
 - Low-Level Radioactive Waste Disposal Center
 - Vitrified Waste Storage Center
 - Reprocessing Plant

Location: Rokkasho Vil., Aomori Pref.

Description:

Official Website:

License Holder(s): Japan Nuclear Fuel Limited (JNFL)

Comment **# 9749: Uranium Enrichment Plant**

- 1,050 tSWU/y

Comment **# 9750: 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.

A burial waste disposal at a depth with sufficient safety margin to conventional underground usage (e.g. 50-100m) is considered for 'Waste with relatively high levels of radioactivity'. JNFL is conducting a detailed survey on the geology and ground water of the premises for a basic design of the disposal facility since 2002 following the one-year preliminary study.

Comment **# 9751: Vitrified Waste Storage Center**

Japanese nuclear utilities entrust the two overseas companies, BNFL (UK) and COGEMA (France) with reprocessing of spent fuel in total about 7,100 tU. Uranium and Plutonium recovered from reprocessing of spent fuel are returned to each Japanese company as recycled nuclear fuel. At the same time, radioactive waste, a by-product of reprocessing, is also returned.

The shipment of vitrified HLW (VHLW) from France to Japan has been safely performed since 1995. The specially designed transport casks, which fulfill the IAEA regulation criteria for the Type-B package and are fully licensed by the French and Japanese Authorities, have been used to transport VHLW canisters. These returned VHLW are stored in the JNFL's Vitrified Waste Storage Center.

Comment **# 9752: Reprocessing Plant**

- 800 tU/y (Under Construction)

Construction of the first commercial reprocessing plant in Japan has almost completed and test operations have been taken place in the main reprocessing process plant. Since December 2004, test operation using depleted uranium has started.

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.

Waste management facilities that are located at this site:

Facility:	LLWDC-1
Description:	Low-Level Radioactive Waste Disposal Center; No.1 Disposal facility

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Disposal part of facility**LLWDC-1**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	No	No
WcTRU	No	No
UW	No	No
WfPR	Yes	Yes
WfNA	No	No
RIW	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	Yes		
Capacity existing (m3):	30720	Capacity planned (m3):	40000

Depth (m):	6 - 12	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1982	1985	False
site selection	1984	1985	False
design	1985	1990	False
construction	1990	2027	False
commissioning	1988	1990	False
operation	1992	2027	False
closure		2027	False
institutional control	2027	2327	False

Comment **# 9898: Disposal Facility LLWDC-1**Capacity existing: 153,600 drums (=5,120x5x6)
Capacity planned: 200,000 drums

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Facility:	LLWDC-2
Description:	Low-Level Radioactive Waste Disposal Center; No.2 Disposal facility

Disposal part of facility LLWDC-2

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	No	No
WcTRU	No	No
UW	No	No
WfPR	Yes	Yes
WfNA	No	No
RIW	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	Yes		
Capacity existing (m3):	10368	Capacity planned (m3):	40000

Depth (m):	11 - 18	Host medium:	sedimentary (sand)
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Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1992	1993	False
site selection	1984	1985	False
design	1993	1998	False
construction	1998	2030	False
commissioning	1997	1998	False
operation	2000	2030	False
closure		2030	False
institutional control	2030	2330	False

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Comment **# 9897: Disposal Facility LLWDC-2**

Capacity existing: 51,840 drums (=12,960x2x2)

Capacity planned: 200,000 drums

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Reporting Year: 2004

Facility:	REP
Description:	Reprocessing Plant; radioactive waste management (RWM) associated with Spent Fuel Reprocessing

Storage part of facility REP

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	No	Yes
WcTRU	Yes	Yes
UW	No	No
WfPR	No	No
WfNA	No	No
RIW	No	No

List SRS?	No
List UMMT?	No

Capacity:	63,500 drums (12,700 m ³) for solid waste 570 m ³ for resin waste
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Types of Storage Units

Storage Unit Name	Type Name	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

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Processing part of facility REP

The following shows processing status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	No	Yes
WcTRU	No	Yes
UW	No	No
WfPR	No	No
WfNA	No	No
RIW	No	No

Type:	Treatment, Conditioning
Year opened:	0

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)

Site (Structure) : Rokkasho

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Facility:	UEP
Description:	Uranium Enrichment Plant; radioactive waste management (RWM) associated with Uranium enrichment

Storage part of facility UEP

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	No	No
WcTRU	No	No
UW	Yes	Yes
WfPR	No	No
WfNA	No	No
RIW	No	No

List SRS?	No
List UMMT?	No

Capacity:	6,700 drums (1,340 m ³)
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Types of Storage Units

Storage Unit Name	Type Name	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.

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Facility:	VWSC
Description:	Vitrified Waste Storage Center; Storage facility of Vitrified Waste returned from Overseas

Storage part of facility **VWSC**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
HLW	Yes	Yes
WcTRU	Yes	Yes
UW	No	No
WfPR	No	No
WfNA	No	No
RIW	No	No

List SRS?	No
List UMMT?	No

Capacity:	1,440 dry storage pits for Vitrified HLW packages 1,200 drums (240 m ³)
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Types of Storage Units

Storage Unit Name	Type Name	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