Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Full Name: Novi Han Repository

Description: Operation started in 1964, in 1994 was suspended by the Bulgarian Nuclear Safety Authority (CUEAPP). The main reasons were that the repository did not fully comply with the international safety criteria for similar facilities. Currently, the repository is undergoing upgrading and licensing.

The bedrock underlying the site consists of a phyllite schist formation varying in thickness from 300-500 m to 800 m. A weathered zone, about 5 m in thickness, overlies the bedrock. The site has a complex tectonic structure. There is a spring, one km from the repository, which drains the phyllite schist formation. The depth of the groundwater table varies from 6 m to 17 m at the site.

The waste disposed of at the facility is institutional waste consisting of short lived, low and intermediate level waste, except some spent sealed sources, which have high activities and long half lives.

The total capacity, as per original design, is approximately 570 m3

Official Website:

License Holder(s): State Enterprise "Radioactive Waste"
51 James Baucher Blvd.
1407 Sofia
Bulgaria

Comment **# 26988: Institutional Framework**

The Novi Han repository is managed and operated by the Institute for Nuclear Research and Nuclear Energy of the Bulgarian Academy of Sciences. CUEAPP is the regulatory authority for radioactive waste management in Bulgaria.

Waste management facilities that are located at this site:

Facility:	**Accidental**
Description:	Engineered trench for disposal of Low and Intermediate Level (LIL) solid waste generated during accident (originally planned) and normal operation.
Detailed Facility Description:	Total capacity of 237 m3, currently 100 m3 of solid waste before licence suspension in 1994. All disposal units are engineered structures constructed from reinforced concrete and lined with stainless steel and bricks. Vaults are in-ground; only the roof is above the ground level. The engineered trench for accidental waste is the only disposal unit at the site that has a drainage system.
Waste Packages:	Various
Facility Operation:	The licence was suspended in 1994, the repository is currently being upgraded.
Financing:	NEK (the nuclear operator) pays a levy equal to 3% of electricity sales monthly, small producers also pay according to a formula unless they are funded from the State budget, in which case no payment is requested. There is a separate nuclear decommissioning fund.

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Disposal part of facility **Accidental**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	No	No
Category 2a	Yes	No
Category 3	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	200	Capacity planned (m3):	200

Depth (m):	3-4	Host medium:	crystalline rock (other)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1960	1960	False
site selection	1960	1962	False
design	1984	1984	False
construction	1984	1984	False
commissioning	1984	1984	False
operation	1984	1994	False
EVENT: operating license suspended	1994	0	False

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**Biological**
Description:	Concrete vault for disposal of biological waste
Detailed Facility Description:	80m3 capacity with currently 25m3 filled prior to licence suspension in 1994.
Facility Operation:	The licence was suspended in 1994, the repository is currently being upgraded.
Financing:	NEK (the nuclear operator) pays a levy equal to 3% of electricity sales monthly, small producers also pay according to a formula unless they are funded from the State budget, in which case no payment is requested. There is a separate nuclear decommissioning fund.

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Disposal part of facility **Biological**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	No	No
Category 2a	Yes	No
Category 3	No	No

List SRS?	No
List UMMT?	No

Type:	engineered surface		
Facility is modular?	No		
Capacity existing (m3):	80	Capacity planned (m3):	80

Depth (m):	3-4	Host medium:	crystalline rock (other)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1960	1960	False
site selection	1960	1962	False
design	1962	1962	False
construction	1962	1964	False
commissioning	1964	1964	False
operation	1964	1994	False
EVENT: operating license suspended	1994	0	False

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**Liquid**
Description:	Liquid waste storage tanks
Detailed Facility Description:	Four steel tanks for liquid waste – total capacity of 48 m3, with currently 12 m3 used. The steel tanks for liquid waste are situated in a reinforced concrete underground room.
Waste Packages:	Liquid.
Facility Operation:	The repository is currently being upgraded after its license was suspended in 1994.
Financing:	NEK (the nuclear operator) pays a levy equal to 3% of electricity sales monthly, small producers also pay according to a formula unless they are funded from the State budget, in which case no payment is requested. There is a separate nuclear decommissioning fund.

Storage part of facility **Liquid**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	No	No
Category 2a	Yes	No
Category 3	No	No

List SRS?	No
List UMMT?	No

Capacity:	4 stainless steel tanks 12 m3 each, total capacity 48 m3

Types of Storage Units

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

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**Solid**
Description:	Concrete vault for disposal of solid waste originating from nuclear applications
Detailed Facility Description:	Concrete trench for solid waste, consisting of seven separate units with a total capacity of 200 m3, currently 120 m3 waste in the repository. All disposal units are engineered structures constructed from reinforced concrete and lined with stainless steel and bricks. Vaults are in-ground; only the roof is above the ground level.
Waste Packages:	Various.
Facility Operation:	The repository is currently being upgraded after its license was suspended in 1994.
Financing:	NEK (the nuclear operator) pays a levy equal to 3% of electricity sales monthly, small producers also pay according to a formula unless they are funded from the State budget, in which case no payment is requested. There is a separate nuclear decommissioning fund.

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Disposal part of facility **Solid**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	No	No
Category 2a	Yes	No
Category 3	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	237	Capacity planned (m3):	237

Depth (m):	3-4	Host medium:	crystalline rock (other)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1960	1960	False
site selection	1960	1962	False
design	1962	1962	False
construction	1962	1964	False
commissioning	1964	1964	False
operation	1964	1994	False
EVENT: operating license suspended	1994	0	False

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**SRS**
Description:	Concrete vault for disposal of spent SRS.
Detailed Facility Description:	Concrete well for spent sealed sources – capacity of 1 m3 with currently 0.65 m3 disposed of. The reinforced concrete well for sealed sources, located below ground level, has a diameter of 5.5 m.
Waste Packages:	Various
Facility Operation:	The repository is currently being upgraded after its license was suspended in 1994.
Financing:	NEK (the nuclear operator) pays a levy equal to 3% of electricity sales monthly, small producers also pay according to a formula unless they are funded from the State budget, in which case no payment is requested. There is a separate nuclear decommissioning fund.

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Disposal part of facility **SRS**

The following shows disposal status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	No	No
Category 2a	No	No
Category 3	No	No

List SRS?	No
List UMMT?	No

Type:	engineered near surface		
Facility is modular?	No		
Capacity existing (m3):	1	Capacity planned (m3):	1

Depth (m):	5.5	Host medium:	crystalline rock (other)

Phase Name	Start Year	End Year	Estimate
planning and/or concept assessment	1960	1960	False
site selection	1960	1962	False
design	1962	1962	False
construction	1962	1964	False
commissioning	1964	1964	False
operation	1964	1994	False
EVENT: operating license suspended	1994	0	False

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**Stor2000**
Description:	Storage units for acceptance of waste generated in nuclear applications, built after 2000

Storage part of facility **Stor2000**

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
Category 2b	Yes	Yes
Category 2a	Yes	Yes
Category 3	No	No

List SRS?	No
List UMMT?	No

Capacity:	Current capacity according to operating license about 950 m3

Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
JPK	container (ISO)	2000	No	No	Yes	Yes
PEK	not in list	2000	No	No	Yes	Yes
GOU	not in list	2001	No	No	Yes	Yes
KUB	not in list	2003	No	No	Yes	Yes
Lot 4	concrete pad	2000	No	No	No	No

Site (Structure) : Novi Han

Country: BULGARIA Reporting Year: 2012

Facility:	**WPF**
Description:	Waste Processing Facility

Processing part of facility **WPF**

The following shows processing status for waste classes and SRS.

Waste CLass	Actual	Planned
Category 2b	No	No
Category 2a	No	No
Category 3	No	No

Type:	Treatment, Conditioning
Year opened:	1964