

Site (Structure) : KRSKO NPP

Country: SLOVENIA

Reporting Year: 2013

Full Name: Krsko Nuclear Power Plant

Description:

Official Website: <http://www.nek.si>

License Holder(s): Krsko Nuclear Power Plant
 Vrbina 12, SI-8270 Krsko, Slovenia
 tel: +386 7 480 20 00

Comment # 14747: About KRSKO NPP (<http://www.nek.si>)

NEK has been in operation for twenty-five years. Projected life-time is until 2023. Over the course of the operational years NEK have witnessed a great many social changes and technological upgrades which have affected their work.

If twenty-five years ago their main aim was adapting to high professional and technical standards of nuclear technology, today the impact of market forces and public acceptability are equally important. If twenty-five years ago they were not yet considering the need to exchange domestic and international operational experience, today this is part of their everyday routine.

All of those changes, and in particular people's increased environmental awareness, are reflected in their everyday operation and in NEK's long-term strategy. They are reflected in the high level of nuclear safety. They guarantee, in the stability and competitiveness of their electricity production in comparison to other energy sources and, last but not least, in their objectives of achieving NEK's public acceptability.

Over the course of twenty-five years they have formed a qualified team which is strongly committed to their goals and to the values of safety culture. On the basis of know-how, continuous training, safe operation and operating efficiency, they are realizing an optimistic vision of the second half of NEK's lifecycle.

Waste management facilities that are located at this site:

Facility:	KRSKO NPP
Description:	Krsko NPP processing and interim storage facility
Detailed Facility Description:	<p>The Krsko NPP includes the following buildings for radioactive waste management: the Auxiliary Building (where the systems for solid, liquid and gaseous waste processing are located), the Solid Radwaste Storage Facility (SRSF), the 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 spent fuel from the plant is stored under water in the spent fuel pool inside the Fuel Handling Building of the Krško NPP.</p> <p>The capacity of the pool has been enlarged with reracking in 2003, to present 1709 fuel assembly (FA) locations that are available for the storage of FA, but due to the changed storage conditions and requirements incurred after 9/11 and the restrictions following the accident at Fukushima is actually available only 1383 positions.</p> <p>Total activity in the storage facility SRSF at the end of 2013 was approximately 19,3 TBq.</p>
Waste Packages:	

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	<p>208 l standard drum (appropriate for the following solid wastes: Compressible Waste, Other, Filters, Spent Resins and Evaporator Bottom), 320 l overpack (used solely for packaging of compressed standard 208 l drums from the first supercompaction campaign), 200 l Stainless Steel heavy drum with biological shield (150 l of usable volume, used for dried primary spent resins tested as Type A Package in accordance with IAEA Safety Standards), 200 l Stainless Steel heavy drum without biological shield (used for secondary spent resins and dried concentrate tested as Type A Package), 200 l heavy carbon steel drum with coating (a limited number of this type of drums were filled with secondary spent resins and dried concentrate), 100 l drums (containing ash from incineration, these drums are immobilised with concrete in 208 l drums), tube-type container (usable volume 869 l or 864 l, is an overpack), spent fuel element</p>
Facility Operation:	KRSKO NPP has been in operation for more than 30 years. Commercial operation started in January 1983.
Financing:	<p>The basic capital of NEK is divided into two equal shares owned by the partners GEN energija l.l.c. and Hrvatska Elektroprivreda p.l.c. . NEK produces and supplies electricity exclusively in favour of the two partners, who each have the right and obligation to use 50% of its total output.</p> <p>The expenses for radioactive waste treatment, conditioning and storing as well as for spent fuel storage are part of the production costs. The financial resources for these activities are ensured during the operational period of the Krško NPP.</p>

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Storage part of facility KRSKO NPP

The following shows storage status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	No	No
ILW	No	No
HLW	No	No

List SRS?	No
List UMMT?	No

Capacity:	Solid radwaste storage facility (LILW) with capacity of app.2500-2800m3 and the decontamination building. The capacity of the spent fuel pool has been enlarged with reracking in 2003—to present 1709 fuel assembly (FA) locations.
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Types of Storage Units

Storage Unit Name	Type Name	Year Opened	Closed?	Full?	Modular?	Contains SRS?
LILW-store	building	1983	No	No	No	No
SF-pool	pool	1983	No	No	No	No
LILW-decon	building	1998	No	No	No	No

Processing part of facility KRSKO NPP

The following shows processing status for waste classes and SRS.

Waste Class	Actual	Planned
VLLW	No	No
LLW	No	No
ILW	No	No
HLW	No	No

Type:	Treatment, Conditioning
Year opened:	1983

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Comment # 12160: Spent Fuel Management Facility in Krsko NPP

Spent Fuel Management Facility

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.