javys
jadrová
a vyraďovacia
spoločnosť, a.s.

SPENT NUCLEAR FUEL MANAGEMENT
SPENT NUCLEAR FUEL TRANSPORTS

Jaslovské Bohunice Site

SPENT NUCLEAR FUEL MANAGEMENT

Nuclear Facility

Interim Spent Fuel Storage (ISFS)

During the process of spent nuclear fuel management the company JAVYS, a. s., ensures provision of services concerning storage, manipulation and monitoring. The company is owner and operator of the nuclear facility Interim Spent Fuel Storage. Since 1987 is in this facility spent nuclear fuel from VVER type reactors safely and long-continuing stored in a wet method for a period of at least 50 years and more, or until the final stage in the spent fuel management is implemented, consisting of re-treatment or its direct storage in deep repository.

From 1996 till 1999 the project of Interim Storage redesign was executed, with seismic reinforcement and expanding its storage capacity. At the same time important technological, control, electrical and safety systems, as well as radiation control systems were redesigned, completion of autonomous cooling circuit of pool water and own consumption diesel generator was executed, system of fuel tightness control, system of civil and technological parts long term monitoring including spent nuclear fuel status monitoring. Ensuring storage of all considered spent nuclear fuel from the Slovak operational and constructed reactor units is in the scope of the project of completion of the storage capacity of the spent nuclear fuel in Jaslovské Bohunice site.

Basic Technical Data

Maximum designed capacity	14,112 pieces of SNF
Fuel storage method	in casks KZ-48 type
Maximum number of fuel assemblies in a container	48 or 30 respectively fuel assemblies
Storage medium of the pools	demineralized water
Maximum thermal power of stored SNF	1,990 kW
Maximum operational temperature in the pools	50 °C

Interim Spent Fuel Storage

ISFS Operation

Interim spent fuel storage facility is a separate building. Its main part consists of four pools, connected by a manipulating channel. Spent nuclear fuel is stored in KZ-48 type casks under a shielding layer of demineralized water which also serves as a cooling medium for heat conduction.

During storage and handling of the spent nuclear fuel in the Interim Storage, all the safety functions are ensured by the building constructions, technological equipment and other systems, designed so as to ensure nuclear and radiation safety of Interim Storage not only during normal operation but also in case of emergency.

Completion of Storage Capacity for Spent Nuclear Fuel

The completion of spent nuclear fuel storage capacity is proposed to by realized in two stages, whereby the first stage will cover enhancing the storage capacity by at least 10,100 pieces of spent nuclear fuel and the second phase by a minimum of 8,500 pieces of spent nuclear fuel. The completed storage capacity are structurally linked to the current ISFS building. Spent nuclear fuel stored is proposed by dry storage in hermetic canisters placed in underground reinforced concrete storage modules.

SPENT NUCLEAR FUEL TRANSPORTS

The company JAVYS, a. s., transports spent nuclear fuel from the operational reactor units in C-30 type containers in special railway carriages. The transports are subject to strict security measures, safe, reliable and according to the legislative demands and conditions of valid licences for handling and transport of spent nuclear fuel.

After the spent fuel transport, the container is moved by a crane into the receiving pool of the Interim Storage, from which the container with the spent nuclear fuel is moved to the specified final position in the storage pool.

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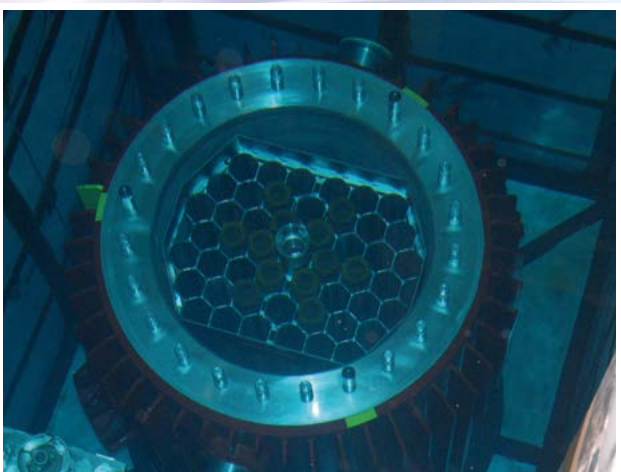
Transport containers C-30

Transport container C-30
with cask KZ-48 and spent nuclear fuel



In the control room
of the Interim Spent Fuel Storage