

Spent Nuclear Fuel Management

Spent Nuclear Fuel — Fuel Elements or their groups retrieved from nuclear reactors of Nuclear Power Plants and other installations. Fuel is considered as spent if it is not able to maintain effectively the chain reaction.

During the electricity generation within the period from 1977 to 2000 the Chernobyl Nuclear Power Plant used 21,284 Fuel Assemblies.

All these Fuel Assemblies currently are stored in the "wet" type Spent Nuclear Fuel Storage Facility (hereinafter: ISF-1).

Fuel Assemblies are stored under the water. Storage in such conditions allows monitoring the fuel status, providing the necessary biological protection and removing the residual heat.



The ISF-1 was commissioned in 1986. This facility is not designed for long-term Spent Fuel storage (more than 100 years) and its lifetime is limited to 2028. Operation beyond this term requires significant scopes of reconstruction and reinforcement of building structures. Besides, the wet storage method is not rational for long-term storage of Spent Nuclear Fuel. Therefore, all Spent Fuel Assemblies (hereinafter: SFA) will be moved into a new Interim dry-type Nuclear Fuel Storage Facility (hereinafter: ISF-2).

The dry-type Spent Nuclear Fuel Storage Facility is designed for SFA preparation for storage and storage within 100 years.

Basic information: [Interim of "dry" type Spent Nuclear Fuel Storage Facility \(ISF-2\)](#)

In ISF-2 the fuel will be stored in special canisters placed in concrete modules. Before storage, the fuel will be processed and dried in a spent fuel processing facility. After the end of 100-year storage period the fuel will be transferred to another storage facility, or, if necessary technologies are available, will be reused.