

INTERIM SPENT FUEL STORAGE FACILITY B1 AT IGNALINA NUCLEAR POWER PLANT



On the 12th January 2005 Ignalina Nuclear Power Plant signed a contract with the German Consortium GNS - NUKEM for design and construction of an Interim Spent Fuel Storage Facility (ISFSF) which will be used to store approx. 18.000 fuel assemblies from both INPP Reactor Units. The Contract is financed with the proceeds of the Ignalina International Decommissioning Support Fund (IIDSF) administered by the European Bank for Reconstruction and Development (EBRD) and has a value of Euro 92,7 million for phase 1 (delivery of the whole B1 infrastructure and 39 CONSTOR[®] casks) and of Euro 64,6 million (price basis 2004) for phase 2 (delivery of 163 CONSTOR[®] casks).

The Consortium GNS - NUKEM is a joint venture partnership of the two German companies GNS Gesellschaft für Nuklear-Service mbH and NUKEM.

The Storage Facility utilizes the technology of dry long-term storage of spent fuel in metal-and-heavy concrete CONSTOR[®] casks, similar to those used at the existing INPP Storage Facility. The new ISFSF will be designed to store spent nuclear fuel for a period of at least 50 years. Commissioning of the first stage of ISFSF is scheduled for September 2009 whereas the completion of the complete ISFSF is scheduled for 2011.

The safety and equipment of the Storage Facility shall comply with up-to-date requirements of the European Union and the Republic of Lithuania using well-established and understood technology. Physical protection (security) systems will be state-of-the-art. The scope of the Contractor's tasks includes design, preparation of licensing documentation, manufacturing and delivery of equipment, construction, installation, testing and commissioning of the Interim Spent Fuel Storage Facility.

The casks which will be delivered under the signed contract are modified as compared with the already delivered casks. The modified design brings advantages for all parties, because small changes in the dimensions by a modified cask construction material will bring an 80% higher storage capacity for each cask. This higher storage quantity is

achieved by the accommodation of two baskets: the inner basket provided by INPP having a capacity of 102 fuel bundles and the outer ring basket with a capacity of 80 fuel bundles. Fuel bundles from the loaded inner basket which are already stored in the cooling pool will be loaded into the outer ring basket. This will happen under water at the reactor pool with a newly designed Fuel Bundle Handling Machine. A further aspect is that the consortium has foreseen to involve Lithuanian companies up to approx. 50% of the contract value.

From the INPP side the ISFSF Project is managed by INPP Decommissioning Service Unit.