

B2/3/4 project. Solid Waste Management and Storage Facilities (SWMSF)

Objective of B2/3/4 Project is the design and construction of new facility for retrieval, treatment and temporary storage of INPP solid radioactive waste. The facility will treat the solid radioactive waste generated until final shutdown of Unit 2 (end of 2009), as well as the waste generated as the result of INPP decommissioning activities.

The Project consists of **two individual parts** implemented simultaneously: **B2** – Design and Construction of New Solid Radioactive Waste Retrieval Facility, **B3/4** – Design and Construction of New Solid Radioactive Waste Treatment and Storage Facility.

After commissioning of new facility, new solid radioactive waste management and storage system, meeting the latest requirements of legislation of the Republic of Lithuania, European Union standards and IAEA references, will be implemented at INPP.

After commissioning of new SWMSF:

- radioactive waste will be retrieved from relevant temporary storage facilities and managed;
- SWRF (B2) is designed for retrieval of solid radioactive waste from existing storage facilities and sorting;
- very low-level SRW, suitable for disposal in a surface repository, will be packaged and transported to B19-1 Facility for temporary storage;
- low and medium level SRW will be transported to B3/4 Facility for further treatment.
- SRW management in SWMSF (B3/4) will be carried out in accordance with new classification system;
- after SRW treatment in SWMSF (fragmentation, incineration, pressing) final packages with short-lived low and medium level SRW will be formed, placed in SWSF-SLW (B4) and then transported to the near surface repository (B25 Project) for disposal. Long-lived low and medium level SRW after sorting and characterization will be transported to SWSF-LLW for temporary storage until construction of the near surface repository is completed (term for storage of SLW and LLW packages in SWSF – up to 50 years).

Contractor: NUKEM Technologies GmbH (Germany). The Contract was signed on 30 November 2005. Contractual commissioning term – December 2009.

The Project is financed by the Ignalina International Decommissioning Support Fund, which is administered by the European Bank of Reconstruction and Development.

Project value: Initial total value of the Contract was 120 million Eur: B2 - 32.8 million Eur and B3/4 – 87.2 million Eur. Current Contract value is 196.8 million Eur: B2 – 54.6 million Eur and B3/4 – 142.2 million Eur.

CURRENT SITUATION (updated 2020-02-28):

SWRF (B2 Project)

Retrieval Unit 1 (RU1) was commissioned: on 8 June 2017 INPP received a license for industrial operation (License No. 16.1-93). RU1 commissioning totally ensures treatment and preparation of solid very low level waste generated as the result of INPP equipment dismantling, operational waste, as well as the waste retrieved from temporary radioactive waste storage facilities (buildings 155 and 155/1) for disposal.

“Hot” trials were carried out in Retrieval Units 2 and 3 (RU2; RU3) in accordance with the “hot” trial programs using radioactive waste approved by the Regulator (VATESI). The reports on the results of “hot” trials were prepared and approved by VATESI. Final RU2 and RU3 Safety Analysis Report was prepared and submitted to VATESIR for approval in January 2020.

SWTSF (B3/4 Project)

“Hot” trials using radioactive waste were carried out in SWTSF (B3/4) in full scope in accordance with 3 programs approved by the Regulator (VATESI). Reports on the results were provided to VATESI: 2 reports were approved; the second revision of the report on “hot” trials of the incineration facility updated in accordance with VATESI comments is under approval.

For the purpose of performance of works on low and medium level SLW and LLW generated as the result of INPP decommissioning, INPP agreed with VATESI expanded “hot” trial program, which enabled to perform the works within the framework of dismantling projects, SNFA cutting, etc., using SWTSF capacities. Expanded “hot” trial program provides management of SRW referred to any class (from A to F). After approval of the reports on the results of “hot” trials, Final Safety Analysis Report for B3/4 Facility will be completed and submitted to the Regulator (VATESI) for approval.

Project implementation term was extended as the result of increase of the scope of “hot” trials carried out according to individual “hot” trial programs and increase of additional works. Five “hot” trial programs, as well as modification of equipment for management and transportation of SRW

referred to the third group were developed and approved with VATESI for “hot” trials in RU2, RU3 of B3/4.