

CEG Newsletter #4

Belgium

The Belgium Nuclear Research Centre (SCK*CEN) and the Leningrad Branch of RosRAO hold a joint workshop on the "Site Characterization of the Vendian Clays" in November 2008 in Mol and Brussels. Russian counterparts were informed on the SCK*CEN experience in determination methods and analyses of clays and interpretation, and use of the resulting data in the site characterization programme. Based on a joint preliminary examination of information on the Kotlin clay in the Leningrad region (a geological formation with attractive characteristics for hosting a repository), the workshop agreed to continue joint studies of the geochemical and geomechanical behaviour of the Kotlin clay, and migration of waste products in it.

Canada

During the past 12 months Canada commenced execution of a new Global Partnership program of nuclear powered submarines (NPS) dismantling following its first 12 NPS program in North-West Russia that ran from July 2004 through March 2008. The new program addresses NPS dismantling in both North West and Far-East Russia. Two Yankee Class NPS have been de-fuelled under Canadian funding at SRC Zvezdochka and one of these NPS has subsequently been dismantled.

Under Canada's program two NPS will be transported the 2,500Km from Petropavlovsk to Bolshoi Kamen near Vladivostok as dry deck cargo on the work deck of a chartered Dutch heavy lift vessel in the summer of 2009. This unique 'World first' has taken over 18 months of planning with the involvement of salvage experts for a number of countries.

In the Russian Far East Canada has funded upgrades to the Bolshoi Kamen - Smolyaninovo railway line so that it is capable of accommodating the special trains transporting spent nuclear fuel from FEP Zvezda. The railway will be operational in August 2009. With this rail-line operational all spent nuclear fuel will be capable of being entirely removed from the Far East region eliminating the significant back-log of SNF stored at FEP Zvezda.



A Canadian funded bridge completed in May 2009 as a part for the railway line for SNF transportation from the Far-East

France

France has agreed to help the Rosatom State Corporation in reprocessing the legacy SNF and take part in rebuilding of a hot cell at PA Mayak for handling of damaged SNF assemblies that will be removed from former navy bases (North-West and Far-East of Russia). The existing hot cell for damaged canisters will be decontaminated and refitted for handling of damaged SNF assemblies in order to make them suitable for further reprocessing. The first step will be carrying out a design project. The cell is expected to be commissioned in 2011.

Under the French Commissariat for Atomic Energy (CEA) financing and control, SevRAO and other involved Russian sub-contractors, carried out decontamination of the upper part of the "Alpha" submarine core #910. The dose rate has been reduced to the level sufficient for the reactor core unloading. CEA will finance the unloading as well as all preparatory works.

France funds a new incinerator for the Low Level Radioactive Waste to be installed at the Zvezdochka shipyard. The furnace was manufactured in France and together with necessary equipment was imported to Russia, and has recently passed through the customs clearance. The furnace and all related equipment are now being mounted at Zvezdochka. The incinerator will be commissioned before the end of 2009.



The French made LLW incinerator for Zvezdochka

Germany

The 2nd phase of construction of the Long Term Storage Facility for Reactor Compartments (LTSF RC) at Saida Bay is completed in June. It extends the initial capacity of the facility (the 1st phase) by additional 58 RC and other nuclear objects. The repair workshop for cleaning and painting reactor compartments is under construction. The completion of the workshop is expected in December 2009.

The LTSF RC at Sayda Bay continues to receive reactor compartments. To date 33 reactor compartments have been placed on the pad.

The 3rd phase – the Regional Centre for Conditioning and Long-Term Storage of Radioactive Waste in the North-West Region of the Russian Federation – is under construction. Soil exchange and blasting operations for creating the subsoil are being done. For this reason the construction site equipment was displaced. The subsoil will be completed this year and first works at Concrete foundation are expected to begin. The total German budget is € 600 Million.



Long Term Storage Facility Reactor of Compartments funded by Germany

Japan

Japan funded, through the Japan-Russia Cooperation Committee, the dismantlement of a Charlie I class nuclear submarine in Kamchatka. This project was completed in April 2009.

An implementing arrangement was signed in May for the cooperation on the on-shore long-term storage facility for reactor compartment units in Razboynik Bay. Russia is currently building the first phase of the storage pad suitable for storing up to 28 reactor compartment units. Russia lacks funding for necessary transport equipment to commission the pad in 2010 as initially planned. Japan agreed to provide a floating dock, a tug boat and two cranes to support commissioning of the storage facility. Currently 57 reactor units (in mainly three compartment configuration) have been accumulated in the Far-East of Russia. The total capacity of the long-term storage facility will be 100 reactor units.

Russia

In June the second dispatch of submarine SNF from Gremikha base was carried out. 294 conditional fuel assemblies have been taken from old casks, placed in six transport casks and moved from Gremikha to Atomflot on board the Serebrianka ship. This operation was funded jointly by the Rosatom State Corporation and the French Commissariat for Atomic Energy. Meanwhile the first dispatch has already been moved from Atomflot to PA Mayak for reprocessing (see photo). The next steps will be the removal of damaged VVR fuel and reactor cores from Alfa class submarines.



Also in June a contract was signed with France on removal of a reactor core from an Alfa class Submarine. This operation is to be done by the end of this year.

Rosatom hosted a CEG workshop on Management of SNF and RW: Regulatory and Licensing Issues in May in St.Petersburg. See proceedings on http://www.iaea.org/OurWork/ST/NE/NEFW/CEG/ceg_ws052009.html

In June an emergency training aimed at enhancing radiation protection of the personnel of SevRao and the local population in Gremikha was held. The training was financially supported by NRPA of Norway. During the drill a TV-conference link was established between Gremikha, the Rosatom Emergency Centre in Moscow, the North-West Emergency Technical Centre and other organizations concerned.

The International Coordination Group for Andreyeva Bay met in February. The partners agreed to complete designing of faculties for preparation and removal of SNF by the end of the year, and also continue the construction of the infrastructure.

The third meeting of the RTG Coordination Working Group took place in June in Moscow. The partners noted the progress achieved in the Baltic Sea - contracts signed for RTG replacement and removal. An extensive RTG removal programme in the Russian Far-East is nearing completion.

A meeting of the Russian-Italian Governing Committee was held in June. The parties noted the progress in implementation of joint projects and signed contracts for dismantling a nuclear submarine (the fourth funded by Italy) and defuelling of the nuclear cruiser Ushakov.

Rosatom and the Atom-Innovation Center will hold the 3-rd International Conference and Exhibition "AtomEco-2009" on 29-30 October 2009 in Moscow. The Conference will address the latest trends in the field of RW and SNF management, decommissioning and decontamination, environmental remediation and clean-up activities, transportation and packaging. More information on www.atomeco.ru.

Sweden

Swedish Radiation Safety Authority (SSM) hosted a CEG workshop on Disposal of Radioactive Waste and Spent Nuclear Fuel – Experience and Plans on 24-26 February in Bommersvik, and arranged a technical tour to SKB laboratories in Oskarshamn and Aspo. See proceedings on: http://www.iaea.org/OurWork/ST/NE/NEFW/CEG/ceg_ws022009%20.html

USA

The U. S. GRTI Program will be recovering 83 RTGs (44 to disassembly and 39 to temporary storage) and installing 63 alternate power sources at lighthouses. 32 RTGs will also be transported from temporary storage at DalRAO and 13 RTGs from NIITFA to disassembly and sending the heat sources to long term storage at Mayak.

In addition, the Orphan Source Recovery Project plans to recover and dispose of over 800 sealed radioactive sources with a total residual activity of over 150 kilocuries. The Protect Project completed upgrades at six RosRAO RADON Branch Sites and is conducting upgrades at two IZOTOP Sites. The process for conducting upgrades at seventy-five medical and industrial sites with radioactive sources is underway. The GTRI program is also providing assistance to Rostekhnadzor for the development of regulations for the protection of radiological sources in Russia.

UK

Nuvia signed a framework agreement with Federal Centre for Nuclear and Radiation Safety as the legal platform for further UK support to recovery of SNF from Andreeva Bay.

A contract is underway for the design of Building 153, the SNF retrieval facility, and regulatory approval for all SNF facilities at Andreeva Bay, worth £900k, supported and co-funded by Sweden. VNIPIET are the main subcontractors for this work.

UK has also placed a £6M contract for the construction of a mechanical repair shop, Building 154, at Andreeva Bay. The work will be performed by the Kurchatov Institute as Principal Contractor. The building is an essential part of infrastructure for SNF retrieval and will support active operations on the site generally.