

Mid – term developments in Russian SNFM system

ROSATOM

SNF system creation Project Office

09.06.2010

Spent Nuclear Fuel Management Concept of the “ROSATOM” State Corporation

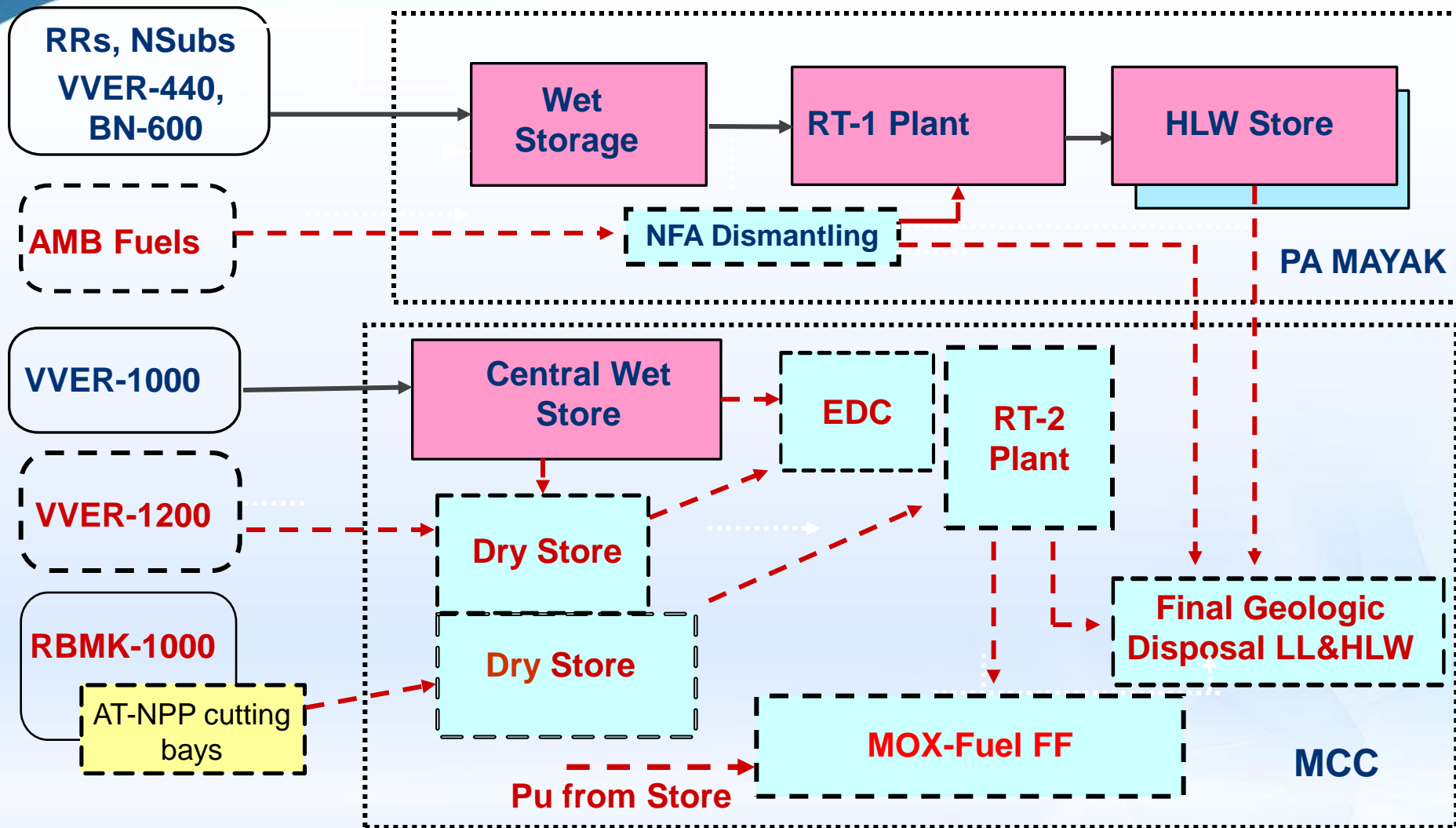
Basic Principles of the Concept–2008

- Reprocessing of the Spent Nuclear Fuel for ecologically acceptable Waste Management and Disposal, Recycling of the Recovered Nuclear Materials
- High priority for Nuclear Safety and for the Nuclear Materials Security during all the management stages, aiming to avoid undue burdens on future generations
- Strategic Directions of the Future Activity:
 - Development of the safe and reliable long-term storage system,
 - Development of reprocessing technologies,
 - Balanced utilization of the reprocessed nuclear materials,
 - Conditioning and final disposal of the radioactive wastes from reprocessing activity

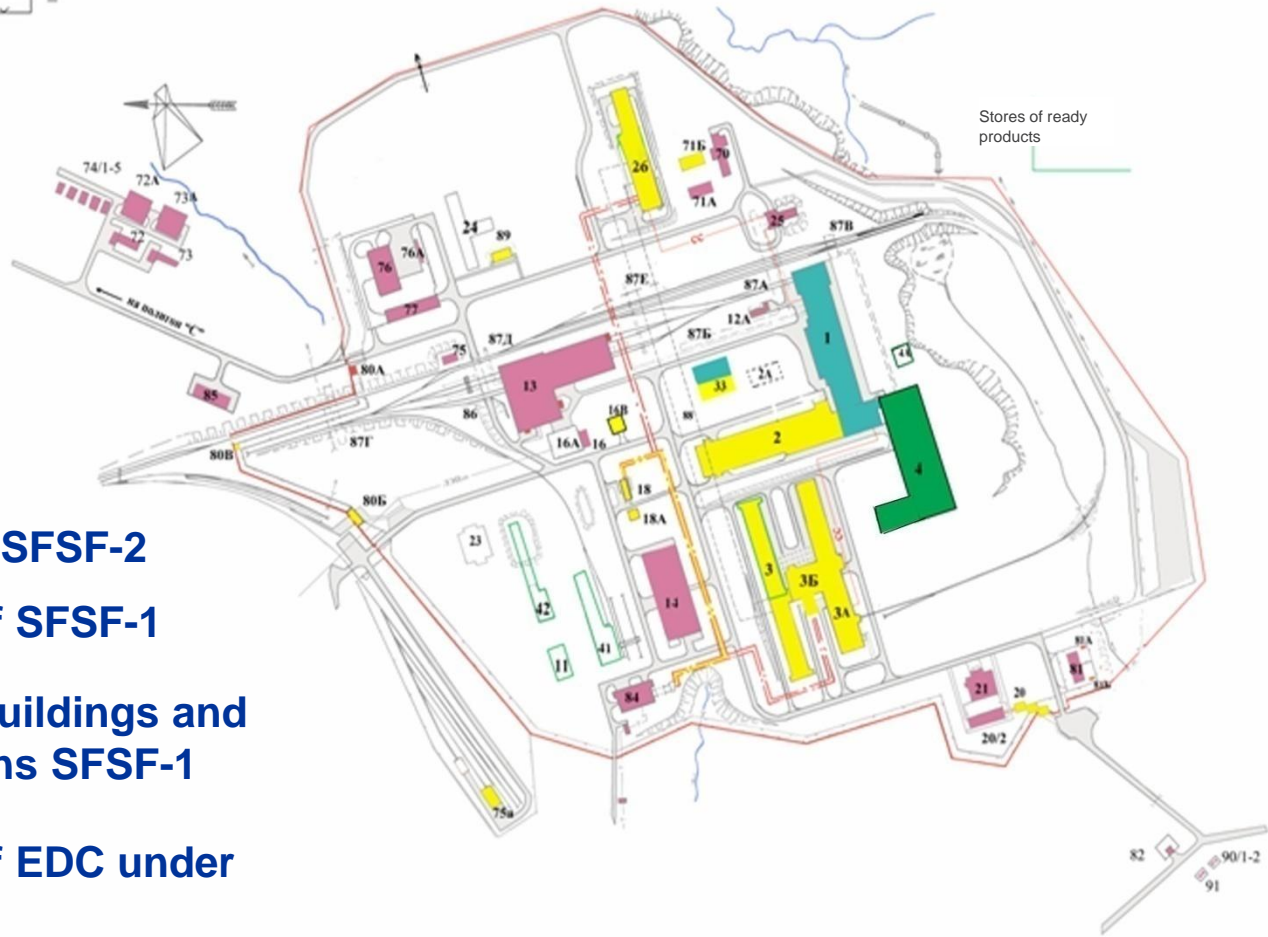
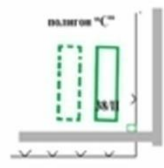
Key Issues for the Russian Spent Nuclear Fuel management system

- Technical & Economical justification and modeling
- Draft of the State Law “On Used Nuclear Fuel Management”
- Infrastructure Development Projects (Wet and Dry Storages)
- Specific types of the Spent Fuel (AMB, RR&Submarine fuels, damaged and non conventional fuels)
- Research and Demo Center for Development of the Nuclear Fuel Reprocessing technology at MCC (Krasnoyarsk)
- Final disposal technology for the Wastes from Reprocessing activity
- MOX Fuel Technology development

Flowchart for the Russian SNF Management System



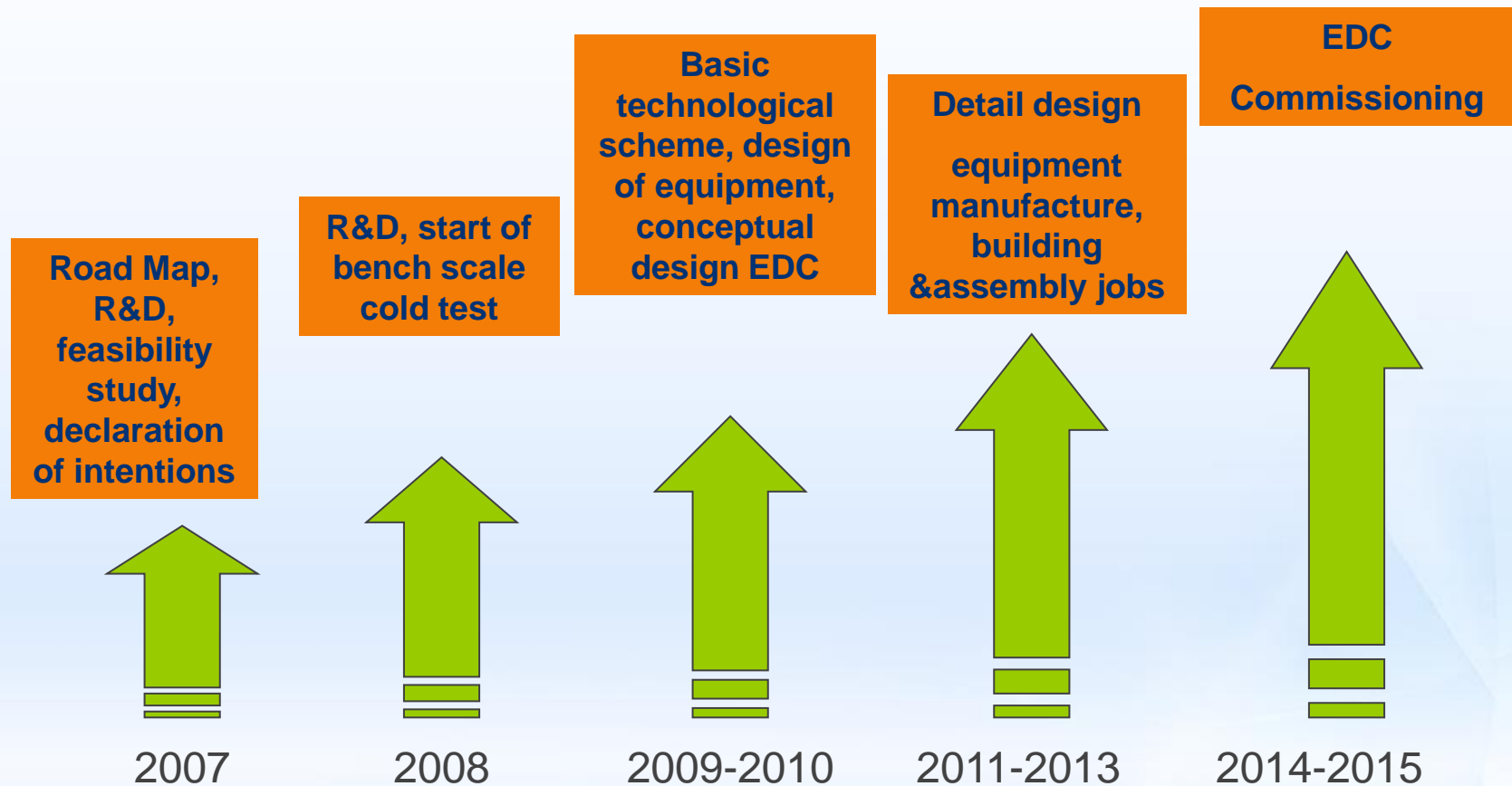
ACCOMMODATION OF INFRASTRUCTURE OBJECTS (DRY AND WET STORAGE, THE EXPERIMENTAL-DEMONSTRATION CENTER) AT KRASNOYARSK MCC



-  Buildings of SFSF-2
-  Buildings of SFSF-1
-  Operating buildings and constructions SFSF-1
-  Buildings of EDC under design

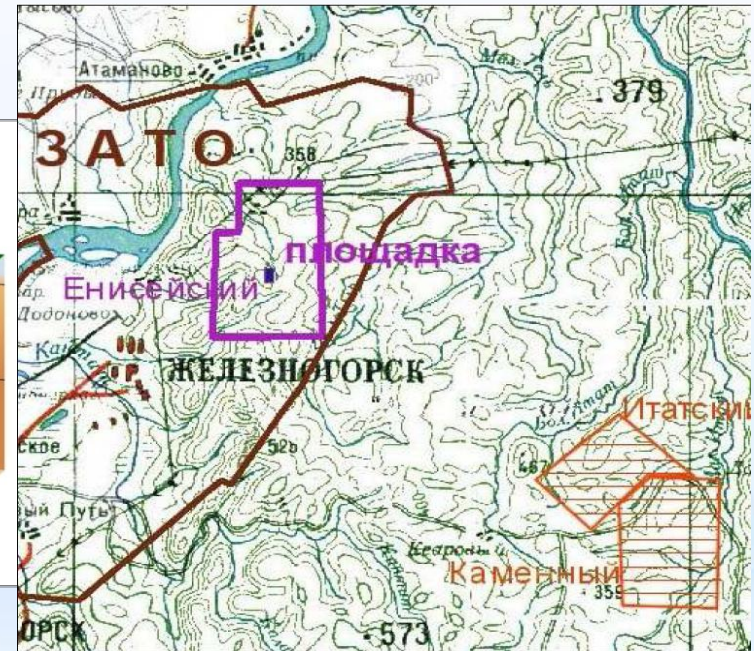
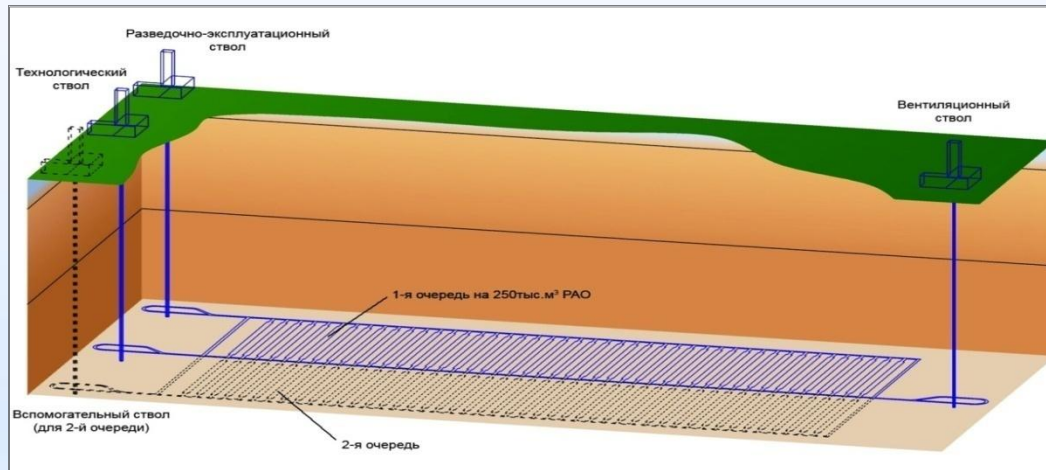
EXPERIMENTAL-DEMONSTRATION CENTER (EDC)

Milestones for EDC creation

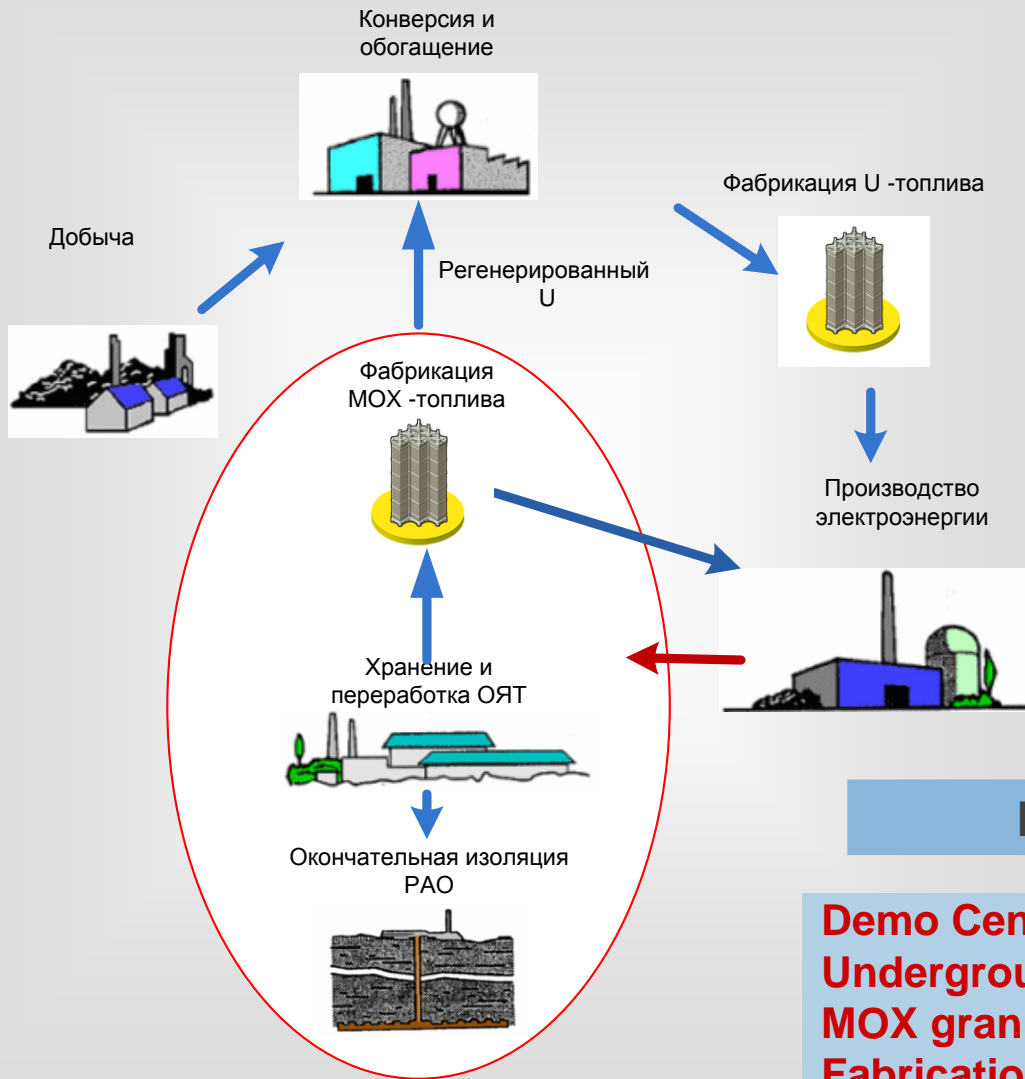


Final Disposal of HLW near MCC Site

Nijnekanskiy Granite Massif – the place for the final disposal of vitrified HLW and long-lived wastes at 500 m depth
I-st Stage – Underground Lab. Declaration of intent was already submitted to regional authorities

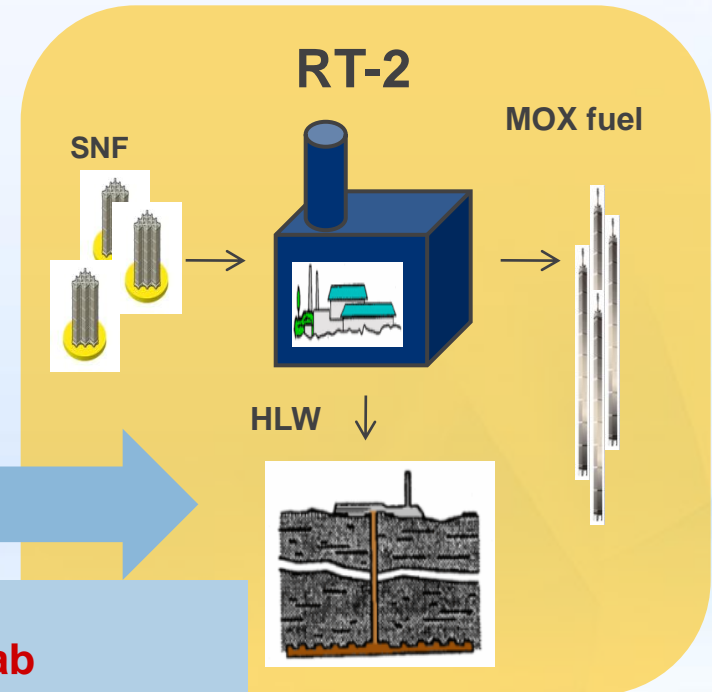


Mining Chemical Combine – Centre for the Closure of Nuclear Fuel Cycle



The Centre will include:

- SNF storage and reprocessing
- MOX fabrication
- Waste final disposal



RT-2

**Demo Centre
Underground lab
MOX granulated Fuel
Fabrication**



POCATOM

Thank you for attention!