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The national debate on the French deep geological disposal facility, known as Cigeo, has been launched on May 15<sup>th</sup>. The first two meetings scheduled in June had to be interrupted early after disruption from opponents to the project. That made any exchange with the public, recognized personalities and experts attending these meetings impossible. The National Commission on Public Debate, responsible for the process, issued a revised debate method on July 3<sup>rd</sup>, extended by 2 months to December, ensuring that everyone who desires so can be heard. The objectives of the debate remain the same: inform the public about Cigéo, allow people to express themselves freely and fully on the project, its objectives, its methods, its characteristics and its impacts, and allow the decision maker (here the State) to be fully informed when he ultimately decides on the creation of the Cigeo disposal facility.

## The tunnel boring machine assembly is complete

After being transported down to the Andra Underground Research Laboratory in Bure as a hundred separate parts, the tunnel boring machine (TBM) is now assembled: the machine, nicknamed Jacqueline, which is 15.3 m long and 6.27 m in diameter, required several weeks of operational testing and commissioning before it began to bore a 80m gallery. The Andra will now test the ground support of galleries by means of prefabricated concrete tunnel lining segments (voussoirs), a technique that could be implemented in the Cigeo deep geological repository.



## Thermal experiment at Bure

At the end of April, the experiment to heat a full-scaled test cell began. The cell was built in a gallery of the Underground Research Laboratory, in Bure.

A horizontal micro-tunnel, 25 meter long, is now heated and monitored by means of sensors located both in the rock and on the steel casing that supports the open cavity. The temperature increase is provided by five dummy cylindrical containers equipped with electrical heating elements releasing as much heat as actual radioactive waste.

ICEM2013  **15th** ASME 2013 INTERNATIONAL CONFERENCE ON ENVIRONMENTAL REMEDIATION AND RADIOACTIVE WASTE MANAGEMENT  
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This year, the focus of the ICEM conference is on the upcoming European waste management and D&D market. Andra will present its disposal and waste management solutions in the exhibition hall. Please drop by the Andra booth and see exactly how Andra's 40 years of experience in waste management and disposal may help you.

## Managing D&D waste in Bulgaria

Andra is now providing assistance to SERAW, the Bulgarian state Enterprise for Waste Management, to manage the materials and waste arising from the decommissioning of Unit 1-4 of Kozloduy NPP. Andra is operating in the framework of the Kozloduy Project Management Unit, led by SERAW, and mainly composed of Nuvia (UK) and Empresario Agrupados (Spain).



The Project includes construction of several facilities, including a Ion Exchange Resins, Evaporates and Concentrates treatment plant, a size reduction and decontamination workshop, a plasma furnace and a Low and Intermediate Level Short Lived Waste (LILW-SL) disposal facility.

## The ThermoChimie thermo-dynamic database

The ThermoChimie thermodynamic database was initially developed by ANDRA in 1996 in support of chemical modeling activities associated with the HLW repository design. ThermoChimie contains data on major elements (including stability of minerals such as clays, zeolites, cementitious phases), a long list of radioelements, such as actinides and lanthanides, chemotoxic metals, as well as organic and inorganic ligands. ThermoChimie is supported by an experimental program, and it has been continuously updated and validated since its creation, through geochemical calculations related to the performance assessment of backfill/buffer materials and/or geological formations. It has been extensively used in Cigeo related models and assessments. ThermoChimie is now available to international counterparts.