

ANDRA

The french national radioactive waste management agency

Waste management operation began in France in 1969. Created in 1979 as an agency within the CEA, ANDRA was established by the December 1991 Waste Act as an independent public body in charge of the long-term management of all radioactive waste, under the supervision of the Ministries in charge of Energy, Ecology, and Research. Its 3 basic missions were extended and their funding secured through the 2006 Planning Act (www.andra.fr).

The missions

An industrial mission concerning, on one hand, the establishment of waste acceptance criteria and their control and, on the other hand, siting, design construction, operation, closure and monitoring of repositories.

This mission includes as well a public service mission in terms of collection of waste of the “small-scale nuclear activities” producers or owners (including the so-called “household” radioactive waste, ie waste owned by private individuals) clean-up and rehabilitation of orphan polluted sites.



A R&D mission to propose safe long-term solutions for radioactive waste without current disposal system; this mission includes research on long-term storage, since the 2006 Planning Act, in order to propose interim solutions while final ones are being studied.



An information mission, notably through the periodic publication of the National Inventory of radioactive materials and waste. This mission includes as well an active policy of dialogue with stakeholders both at national and local level.



ANDRA ORGANISATION

IS COMPOSED AS DETAILED BELOW

Headquarters sited near Paris with specific divisions relevant to Andra's missions as the scientific division, the project division, the industrial division (in charge as well of the public service mission), the risk management division and support divisions as General secretariat, human resources division, communication and international division;



The industrial division runs as well, with on-site staff:

- > **the surface repository under post-closure monitoring phase, CSM**, since 1994 and located in the Manche district near the AREVA La Hague facility;
- > **the surface repository dealing with low- and intermediate-level short-lived radioactive waste, CSFMA**, and the near-by CSTFA surface repository dealing with very-low-level radioactive waste, both operating in the Aube district.

The Centre Meuse/Haute-Marne, CMHM, including the Underground Research Laboratory which is located in Bure, and **the Saudron Showroom for technological demonstrators**.

Apart from its statutory governing board, three advisory committees comprising French and foreign experts were created to assist Andra and/or review its work:

- > the Scientific Council, established by Decree to review Andra scientific policy and results,
- > the Expertise and Oversight Committee for the Information and Consultation Approach (COESDIC) to site a geological repository, created in 2007 upon Andra CEO's decision and composed of experts in social sciences and public information. This Committee could as well be consulted for any other project.
- > the Scientific Orientation Committee (COS) created just after the granting of the Underground Research Laboratory license and composed of experts in geosciences to provide advices on the experimental programme carried out at the laboratory. This committee is chaired by a member of the Scientific Council.

By the end of 2009, Andra staff is 450 employees spread on different sites (excluding students carrying out a thesis granted by Andra).

ANDRA's solutions and experience

Andra is responsible for managing all radioactive waste produced in France. It benefits from 40 years' experience in the management of the waste coming from the French nuclear reactors, including all fuel-related facilities.

Andra has developed concepts and methodologies for a large variety of waste categories, notably for LL/IL-SL and very-low-level (VLL) waste. Those concepts are flexible enough to take into account new types and forms of waste throughout the operation of disposal facilities.



Operational waste from nuclear facilities

The Agency is currently operating two disposal facilities: one for short-lived low-level and intermediate-level waste (CSFMA) and the other for very-low-level waste (CSTFA). In accordance with waste production rates and with a very good safety record, both facilities accommodate almost all operational waste generated in France.

Moreover, the Agency intervenes on the overall processing of the waste and prescribes the waste-acceptance criteria to be met by the producers before they send their waste to Andra's disposal facilities.

Hence, it implements integrated solutions for radioactive waste management, from initial production until final disposal and further surveillance, monitoring and memory keeping activities.



The Survey

Andra also performs the long-term monitoring of the Centre de Stockage de la Manche, which was shut down in 1994.



Waste from maintenance and dismantling of nuclear facilities

Andra has already worked on a large number of dismantling issues, such as:

- > The identification of a quantitative and radiological inventory of very low-level dismantling waste, followed by the design and operation of adapted disposal facilities for very-low-level waste (CSTFA) and for low- & intermediate-level waste (CSFMA) in the Aube District;
- > The analysis of the graphite-waste inventory, resulting from French first generation NPPs, and the development of adapted disposal concepts, followed by the search for a suitable site for the facility;
- > The analysis of an adapted system for PWR vessel heads, followed by the acceptance of that type of waste at the CSFMA;
- > The analysis of the adequate waste management system for PWR steam generators and for PWR vessels.



Deep geological repository



Le laboratoire souterrain de Bure

Andra benefits from 20 years' experience in the preparation of projects for the implementation of a repository for HL and IL-LL waste. Since the late 1990s, it conducts studies and investigations within the Meuse/Haute-Marne Underground Research Laboratory (URL).

The research carried out notably at the URL led to the publication of the Dossier 2005 in which Andra demonstrated the basic feasibility of a deep geological repository for HL and IL-LL waste, including a reversibility rationale. Dossier 2005 was followed by an improved version, Dossier 2009, including further steps toward siting, by selecting a restricted 30 km² area for further detailed investigations, before the final site selection in 2013.

Andra also co-ordinates projects on Engineering Studies and Demonstration of Repository Designs (ESDRED) and Monitoring Methods and Techniques for Geological Disposal (MoDeRn) in accordance with the European Union's Framework Programmes on Research and Development.

The Agency has developed a methodology for the phenomenological analysis of repository situations in order to describe and analyze any phenomenon likely to occur throughout the evolution of the repository.

Andra also performs long-term safety assessments of a HLW repository.

Radium-bearing waste

In its capacity to manage all radioactive waste, the Agency has more than 15 years' experience in drawing inventories (notably prospective) and characterizing radioactive waste resulting not only from the nuclear power sector, but also from the chemical industry and other industrial applications of radioactivity.

Andra has developed concepts and methodologies for a large variety of waste categories, notably those with "very-low-level" and "low-level long-lived" residues, such as radium-bearing waste from industrial activities, as well as for substantial volumes.



Le Laboratoire souterrain de Bure

Polluted and contaminated sites : the industrial past

Management of all radioactive waste produced in France also includes the securing of French sites where industrial, medical and research activities have led to radioactive pollution.

On behalf of the community, the Agency is therefore called upon to manage polluted sites: old industrial plants, laboratories, schools, etc. In the Paris suburbs, for instance, Andra cleaned up homes that had been built on the site of a former company which used radium. The Agency is also intervening in Southern France to clean up a site where the former operator has abandoned radioactive products.



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