

Report from Visit to Bure, 3-6 October 2011

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1. INTRODUCTION

- 1.1 From 3-6 October 2011, representatives from the West Cumbria Managing Radioactive Waste Safely Partnership and the NDA visited an Underground Research Laboratory (URL) located near Bure in France. This report summarises the information collected on the visit as well as the meetings that took place with ANDRA (the French waste management organisation) and representatives of the local communities around the site. The visit was arranged by the NDA, with input from the Partnership. A reporter from the BBC also participated in the visit.

2. ITINERARY

Monday 3rd October

Travel from Cumbria to Joinville, France

Tuesday 4th October

Meetings with representatives from ANDRA and a tour of the Underground Research Laboratory Meuse/Haute-Marne (Bure)

Meeting with representatives from the CLIS (Comité Local d'Information et de Suivi or Local Information and Oversight Committee)

Wednesday 5th October

Meetings with representatives from ANDRA and a tour of the Surface Facility Centre de L'Aube.

Meeting with a representative from the GIP (Groupements d'Intérêt Public or Public Information Group)

Dinner with representatives from the CLIS

Thursday 6th October

Travel from Joinville to Cumbria



3. **ANDRA (Agence Nationale pour la gestion des Dechets Radioactifs)**

3.1 ANDRA (the French Waste Management Organisation) reports to three different government Ministries – Energy, Environment and Research, but is completely independent from the waste producers (e.g. EDF and AREVA). ANDRA is responsible for all radioactive waste in France and defines its mission as follows:

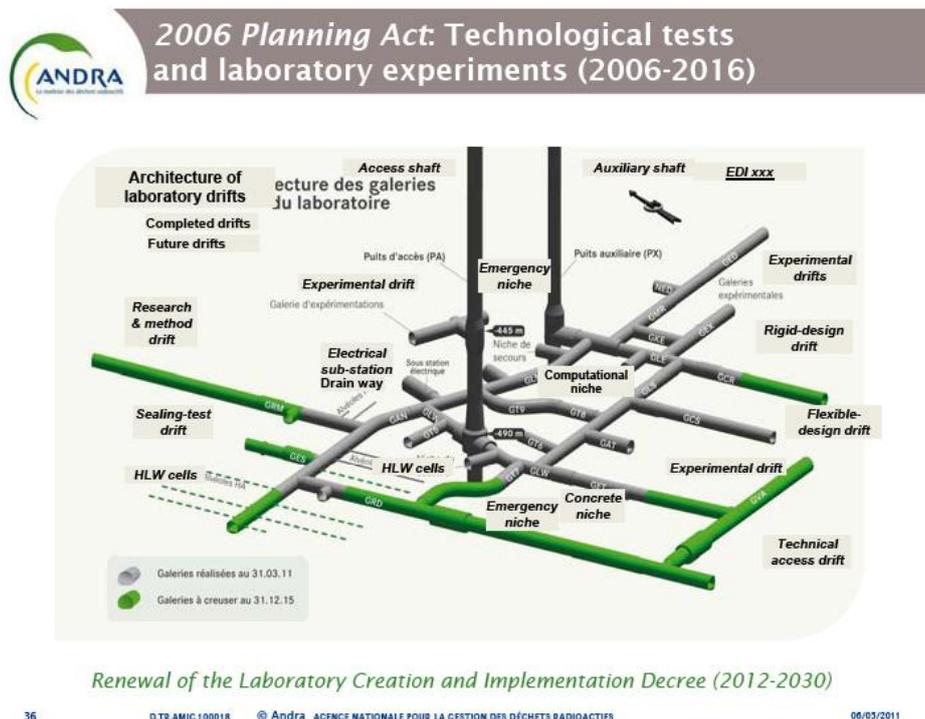
- Operate and monitor the existing surface disposal facilities
- Study and design solutions for the sustainable management of waste for which there is not yet any specific disposal facilities
- Collect and take responsibility for radioactive waste from the “small-scale” nuclear waste producers (hospitals, research laboratories, universities etc...) and radioactive material owned by private individuals
- Proceed to the clean up and remediation of former sites contaminated by radioactivity
- Establish, update every three years, and publish the inventory of radioactive materials and waste, existing in France, as well as its location
- Inform the public
- Share its know-how within France and abroad

3.2 The 1991 Waste Act established ANDRA as a public body and entrusted it with the mandate to conduct studies on the deep disposal

of high level and intermediate level long-lived waste (Note: The French classify waste as either short or long-lived, as well as low, intermediate or high level. 31 years or less is short-lived). This led to the creation of the URL and to a variety of scientific experiments and technological tests in order to demonstrate the feasibility of deep disposal. In 2005, ANDRA presented to the government its Dossier 2005 Report which concluded that deep disposal of HLW and ILW (long-lived) was feasible and this resulted in the 2006 Planning Act which concerned the sustainable management of radioactive materials and waste and empowered ANDRA to design and implement a deep repository.

- 3.3 Both of these laws gave specific, clear objectives and work schedules; detailed the monitoring, assessment, information, transparency and reporting requirements and outlined the funding schemes for ANDRA (e.g. subsidies from Government or tax on producers). All parties were therefore clear on what was required, by when and who was going to pay. The 2006 law also imposed the requirement that deep disposal be reversible for at least 100 years and it is expected that the next law (scheduled for 2016, prior to the granting of any repository licence) will specify all applicable reversibility conditions.
- 3.4 There is no on-site disposal in France and ANDRA is therefore tasked with providing national solutions for waste management. The proximity principle does not apply and this results in a lot of transportation, by both rail and road. The issue of whether or not the final repository should have its own dedicated railhead is still being considered. There is no veto or right of withdrawal for any volunteer community, but ANDRA recognised that implementation would be problematic if local communities were not supportive. In terms of any community benefits, each of the two “departements” affected (Meuse and Haute-Marne) received €30m per year. This was in addition to any direct and indirect employment opportunities from the URL. This money is managed by the Public Information Group (see below) and was a similar amount to that received by communities that hosted nuclear power stations. At the moment, this funding came direct from central government, but in the longer term, it would come from a tax on the repository users. In terms of employees, more than 50% of those currently working at the URL live within 20km of the site.

4. THE UNDERGROUND RESEARCH LABORATORY (MEUSE/Haute-MARNE (BURE))



4.1 The URL is located close to the border of Meuse and Haute-Marne and the location of the final repository will similarly impact on both areas. The URL underground structures consist of two shafts (one of 5m and one of 4m in diameter) sunk down to a depth of 500m; one 41m long experimental tunnel at a depth of 445m for observation and measurement purposes; and a network of 740m+ of tunnels at a depth of 490m for experimental purposes. The URL is only for scientific and technical studies and does not contain any radioactive waste. In accordance with its licensing conditions, the URL shall never serve as a disposal facility. In terms of numbers, the experimental programme has included:

- 44 deep boreholes drilled from the surface;
- 220 boreholes drilled from the underground tunnels;
- 2150 sensors installed in the rock;
- 7km of cored rock; and
- 32250 rock samples



- 4.2 The range of scientific experiments carried out to date has included testing the containment capabilities of the rock, understanding the impact of heat on the rock and assessing the rock response during excavation. In parallel, ANDRA is also conducting technical studies focusing on the equipment likely to be needed in the deep repository, including that required for construction, operation and closure with regard to waste packages, conditioning equipment, disposal containers and package handling. Two kinds of prototypes have been built and are on display in the Technological Exhibition Facility which is open to the public. The first prototypes were of concrete disposal containers, which were tested for ageing and subjected to drop tests, and the second were for testing remote handling mechanisms for waste containers.



- 4.3 The URL licence expires at the end of 2011, but it will be extended until 2030. This will overlap with the start of repository operations (scheduled for 2025) to allow for ongoing research and development. The current plan is to return the URL site to its previous condition, but the scientific community is lobbying for the laboratory to continue operating as it provides an important, some say even unique, source of data.
- 4.4 ANDRA recognises that the implementation of the repository will have an impact on the environment and this is why the “Perennial Observatory of the Environment” was created. The Observatory is currently recording the precise, current, environment of Meuse and Haute-Marne in order to be able to carry out the necessary environmental impact monitoring required during the construction and operation of the repository. The Observatory has six research programmes covering soils, habitat, air, water, forest and fauna and works closely with other environmental organisations and research laboratories.

4.5 Going forward, key dates for the repository are as follows:

2013 – Public debate, followed by the selection of the implementation site by the government

2015 – filing and review of repository licence application

2016 – adoption of new law specifying the reversibility conditions of deep disposal

2017 – construction of the repository begins (subject to successful licence application)

2025 – start-up of repository operations

5. CLIS (COMITÉ LOCAL D'INFORMATION ET DE SUIVI OR LOCAL INFORMATION AND OVERSIGHT COMMITTEE)

5.1 Originally created by the 1991 Waste Act, the CLIS was “renewed” following the 2006 Planning Act and is a committee made up of 91 voting members. These members represent different levels of elected representation in Meuse and Haute-Marne, the regional council of Lorraine (within which Meuse is located) and Champagne-Ardenne (within which Haute-Marne is located), as well as the “Order of Physicians” of both Meuse and Haute Marne, trade unions, NGOs and qualified experts including a radiotherapy physician and a geologist. The nuclear safety regulator and ANDRA each have a “consultative” voice and there is an independent secretariat of three people. The CLIS mission is to allow its members to:

- Obtain the maximum of information on research in the area of management of radioactive waste and, particularly, its disposal, from the relevant institutional organisations as well as from external experts;
- Follow up, with expert help, the development of knowledge in the radioactive waste management field;
- Bring the information in an accessible form to the public;
- Gather the maximum of data (environmental, epidemiological etc...) that can serve as reference points in the future; and
- Ensure dialogue and debate.



5.2 Due to the need for translation, the majority of the discussion took place in the form of questions from the Partnership representatives and answers from the CLIS. These are summarised below:

Q. You have no nuclear history in the area, so why did you volunteer?

A. There were a number of reasons – first, the geology is suitable; second, originally there were supposed to be a number of URLs and they did not know they would end up being the only one; and third, the community benefits, which they hope will revive the local economy.

Q. How is the CLIS financed and is the secretariat independent?

A. The CLIS has a budget of around €300K pa and this is roughly 50% from central government and 50% from the waste producers. The secretariat is independent and is made up of one full-time and two part-time employees.

Q. How have you managed to include opposition voices within the CLIS?

A. The CLIS invited the NGOs to participate and some have. They play a useful role, but as in the UK, they have to balance participation with the perception that they are somehow giving the process legitimacy. At the moment, opposition groups are pressing for a local referendum, but in France, laws are set centrally, so a local referendum has no legal basis.

Q. Do you feel you have a strong voice with Government?

A. The CLIS took part in the public debate around the 2006 Planning Act and published a report, by a foreign expert, on ANDRA's scientific work

programme. The report was read by Parliament and covering in the press. Representatives from the CLIS approached MPs and lobbied in advance of the 2006 Planning Act and they felt that reasonably content that the final law reflected what they had wanted. The CLIS is also able to modify ANDRA's research proposals.

- Q. What is the best advice you can give to the West Cumbria MRWS Partnership?
- A. Take as long as you need, only go forward one step at a time, no compromises on safety and make sure there is more than one URL (Note: We explained that the current thinking in the UK on the need or not for URLs was different to that in France).
- Q. How do you respond to criticisms that the community is being bribed?
- A. Nobody says it is a bribe when it relates to a new nuclear power plant! This is standard practice in France.
- Q. How confident are you in the information coming from the URL?
- A. Very confident, but we need to remain vigilant and challenging.
- Q. Do you see value in developing closer links between the CLIS and the West Cumbria MRWS Partnership?
- A. Always useful to exchange information and share experiences and we already have links with our counterparts in Germany, Switzerland, Japan and the US, so "Yes".

6. AUBE DISPOSAL FACILITIES

- 6.1 In the Aube district, ANDRA operates two surface disposal facilities, the first one for low and intermediate level short-lived waste (CSFMA) and the second one for very low level waste (CSTFA).
- 6.2 **CSFMA** – commissioned on 13 January 1992; footprint of 95ha, including 30ha disposal zone; 1000000m³ disposal capacity (around 24% used to date); lifetime of the site includes a disposal phase, followed by a 300 year monitoring period; 205 people currently work at the site and the initial investment was €221 million.
- 6.3 **CSTFA** – commissioned on 14 August 2003; footprint of 45ha, including 28.5ha for the disposal zone; disposal capacity of 650000m³ (around 27% used to date); lifetime of the site includes a 30 year disposal phase followed by a 30 year monitoring period; 30 people currently work on the site and the initial investment was €40 million.
- 6.4 Since both sites were opened, the French nuclear industry has increased its level of recycling which has reduced the amount of waste sent to the two sites and consequently extended their lifetimes. However, there is a possibility that the decommissioning of the nuclear power stations might generate sufficient waste to reverse this trend.

6.5 There was some local opposition when the sites were opened, but broad acceptance from the local community now. There is an annual meeting with the CLIS to discuss environmental monitoring and the main results are published on the internet. The CLIS can also commission independent research and monitoring and ANDRA produce a quarterly newsletter that is sent to 21000 households.

7. GIP (GROUPEMENTS D'INTÉRÊT PUBLIC OR PUBLIC INFORMATION GROUP)

7.1 Both Meuse and Haute Marne have a GIP to manage the €30m socio-economic support they receive each year. The Partnership representatives met with the Director of the Meuse GIP and the following points came out of the discussion:

- The money may be used only within the Meuse department – it was not trans-boundary. The €30m is additional money and is not used instead of “normal” funding from central government,
- The GIP was relatively free to agree its own priorities and it has a General Assembly (45 members, including industry representation) that decides on priorities for the year, supported by a Board of elected members and a representative from ANDRA (8 members) who vote on applications for funding.
- The money was used for economic development in the widest sense and, currently, the GIP was focusing on the areas of – economic development and employment; infrastructure (communications and transport); tourism; training, research and development and innovation; urban development; public services (e.g. a crèche or a surgery in a rural area); and environment (looking after forests, drinking water etc...). In 2011, some 400 projects totalling €20m had been supported with around 30% in the public services area.



- The law required the GIP to be totally transparent and they publish an annual report on their website.
- There is a special allowance paid directly to villages closest to the site and requests for support for projects within the proximity zone (defined by 2006 Planning Act) are given more weighting.
- The GIP cannot contribute more than 80% of the total budget of a project.

8. Observations/Conclusions

- 8.1 The main purpose of the visit was to improve our knowledge and understanding of the way that the French are tackling their radioactive waste management and we certainly did that. Some key points of specific note are that:
- the experience of actually travelling down to the URL and observing first-hand the testing that is going on was invaluable;
 - all of the ANDRA staff we encountered were professional and knowledgeable about the project and its relationship with the local community;
 - the full and frank discussions we had with members of the CLIS and the director of the GIP helped us to understand the positives and negatives of their experience of hosting the URL and

preparing for the repository, as well as how they are managing the community benefits that are linked to the project. It was particularly interesting to note the advice from the CLIS to take things one step at a time;

- while there are differences between the situation/approach in France and that in the UK, there are also similarities, including voluntarism. At the end of the day, both countries are relying on local communities agreeing to provide a service to the whole nation.