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Our Aim is *"to make recommendations to Allerdale Borough Council, Copeland Borough Council and Cumbria County Council on whether they should participate or not in the Geological Disposal Facility siting process, without commitment to eventually host a facility".*

E-bulletin No.9 – March 2011

Here's the latest news from the West Cumbria Managing Radioactive Waste Safely Partnership. In this issue, you will find updates on the following:

Please read on to find out what's been happening.

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1. Partnership meetings

- The latest Partnership meeting was held at the Copeland Centre, Whitehaven, on 3rd March 2011.
- The main item at the meeting was a review of the NDA's Research and Development Programme.

The Nuclear Decommissioning Authority's R&D team gave a presentation on how they are approaching this work.

There was also an assessment of the NDA's programme from an independent peer reviewer, Professor Stuart Haszeldine from the School of GeoSciences at the University of Edinburgh, which had been specifically requested by the Partnership.

Professor Haszeldine was complimentary about the breadth and scope of the programme, but he offered some constructive criticism on a number of points.

These included suggesting that the NDA should:

- make it clearer what priority was being given to different parts of the R&D programme, to make the information more transparent and useful,
- make the timescales of the research delivery clearer, and how this relates to the MRWS process stages,
- provide information on costs to indicate the scale of the research task at hand,
- place increased emphasis on research into gas release from a geological disposal facility (GDF), underground water flow, and land uplift due to heat generation from waste.

There was also comment on the R&D plans from the Environment Agency and the Committee on Radioactive Waste Management (CoRWM).

The NDA agreed to provide a response to the points that had been made by early April.

- The Partnership meeting also included an update on regulatory roles, particularly on resources and the Office for Civil Nuclear Security.

The Partnership has to decide whether it is satisfied there are suitable regulatory and planning processes in place or being developed to protect residents, workforce and the environment.

The environment and safety regulators provided further information in response to a request from the Partnership's Steering Group on what resources and resource plans are in place and/or are being developed.

- There was also a presentation and discussion at the meeting on the current vision for West Cumbria and how it is developing, in order to help the Partnership assess how a repository might fit in with this.

  Overall the message was that nuclear and energy projects are likely to be central to West Cumbria's economy, but the need to diversify and support other economic opportunities away from nuclear was also important.

- A report of the latest Partnership meeting will be available on the website shortly (www.westcumbriamrws.org.uk/documents.asp).

- The Partnership meets every six weeks. Members of the public are welcome to attend as observers and are also given an opportunity to ask questions. We would be grateful if anyone who is planning to attend could contact sharon.walker@copeland.gov.uk to let her know so that we can ensure that enough seating is made available. The next scheduled meetings are:

  14th April 2011, The Wave, Maryport, 0900 arrivals, 0930-1600

  24th May 2011, venue to be confirmed, 0900 arrivals, 0930-1600

2. Public & Stakeholder Engagement (completion of PSE2)

- Before the Partnership makes any recommendation on whether to proceed into the Government's siting process, there are three separate rounds of 'Public and Stakeholder Engagement'. The second round of public and stakeholder engagement (PSE2) was held between 8th November 2010 and 11th February 2011.

  A key priority in PSE2 was to significantly raise awareness of the issues involved in the Managing Radioactive Waste Safely (MRWS) process and to seek people's views on three key issues:

  - how to use public views to decide whether to proceed,
  - impacts and community benefits,
  - community involvement in a potential siting process.

  The Partnership carried out a range of communications and engagement activity which can be viewed here.

  The results of the second stage of public engagement are currently being analysed by the Partnership. A full report and recommendations on these will be published later in the spring and this will be made available on the website.

- Once the Partnership has produced a provisional report with its advice to the councils, there will be a third and final round of public engagement starting in the late Summer/early Autumn of 2011. This third round will include a formal consultation on the Partnership's preliminary findings and advice to the councils before a decision is made about whether to proceed further, or withdraw.

However, you can find our more, ask questions and let us know your views at any point before then.

3. Letter from CoRWM on geology of West Cumbria

- In recent months there has been some debate about whether West Cumbria's geology is unsuitable for an underground repository.

The British Geological Survey (BGS) report in October 2010 said the geology of some parts of the area is clearly unsuitable based on the available information, for example, because of coal deposits.

However, in the Partnership's last newsletter Professor David Smythe argued that all of West Cumbria had been ruled out on geological grounds by a planning inquiry in the 1990s, when Nirex looked at an area near Sellafield.

The Committee on Radioactive Waste Management (CoRWM) – the independent committee of experts which recommended that geological disposal was the best available long term way of managing higher activity radioactive waste - has written to the Partnership with its view.

CoRWM says: ‘Our position is that there is presently no credible scientific case to support the contention that all of West Cumbria is geologically unsuitable’.

They argue that the inspector at the inquiry ‘did not at any stage reflect upon or draw conclusions on the suitability or otherwise of West Cumbria *as a whole*.’

They emphasise that it would not be possible to tell whether the area’s geology is suitable without carrying out further investigations. If West Cumbria does take part in the search for somewhere to locate a repository there would be more detailed studies of a range of factors, as well as geology and the community would be involved in overseeing this work.

You can find a full copy of their letter here.

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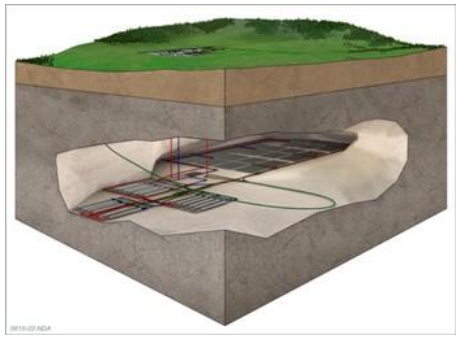
4. NDA Disposal System Safety Case

- In February 2011, the NDA published a suite of generic scientific and technical reports setting out all of the safety factors that they believe need to be considered in submitting an application to the nuclear regulators for permission to operate a deep underground disposal facility.



Following on from the NDA’s ‘Geological Disposal: Steps towards implementation’ report published in July last year, these latest reports are collectively known as the Disposal System Safety Case (DSSC). They cover a host of safety issues including:

- the waste to be disposed of and how it will need to be packaged,
- the safety of the transport to and within the disposal facility,
- the safety of operating such a complex facility and the safety to the environment during all of these phases and into the future long after the facility has been closed.

The NDA says the Disposal System Safety Case documents assess the safety and environmental implications of all aspects associated with the geological disposal of higher activity radioactive waste in the UK. The organisation says preliminary, generic assessments have helped highlight areas where further research is required and the uncertainties that will need to be resolved during a site investigation programme.

You can read more about the Disposal System Safety Case (DSSC) here. You can also read two answers provided by the NDA to frequently asked questions on safety at the end of this e-bulletin.

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5. America’s Waste Isolation Pilot Plant (WIPP)

- Geological disposal is being adopted by a number of countries as a solution for the long-term management of higher activity radioactive waste. The Partnership is therefore looking at overseas developments as part of its work, to monitor how the process is being managed in other countries and learn from their experiences.

The U.S. already has an operational geological disposal facility at Carlsbad, New Mexico. The Waste Isolation Pilot Plant, or WIPP, began disposal operations in March 1999, twenty years after authorisation as an R&D facility by Congress.

Located in the Chihuahuan Desert, the Waste Isolation Pilot Plant disposes of the United States' defence-related radioactive waste. It is a U.S. Department of Energy facility managed by Washington TRU Solutions.

The Partnership had a meeting about the WIPP site in March, consisting of a series of presentations and discussions by video links. The aim was to give Partnership members the chance to find out more about the facility and to talk to some of those involved in running the site as well as members of the local community.

A report of the meeting will be available on the website shortly.

President Obama decided to stop work on another geological disposal facility, a controversial project at Yucca Mountain in Nevada, shortly after he was elected. Discussions are still taking place about what should happen to America's non-military radioactive wastes.

- A documentary film about the geological disposal facility that is being developed in Finland is now available to buy on Amazon and can also be rented on iTunes. It has recently been shown at the Keswick Film Festival and at the Kirkgate Theatre in Cockermouth.

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6. Getting involved

- A key role of the West Cumbria MRWS Partnership is to represent the views of people living in or near West Cumbria in these discussions with the Government.

  We are keen to hear your views throughout the year as the Partnership continues to consider the issues involved.

If you want to get involved then visit the Partnership website for details.

You can send us your views by using e-mail (contact@westcumbriamrws.org), freephone (0800 048 8912) or freepost (Freepost RSKT-LTXU-HAYC, West Cumbria MRWS Partnership, Copeland Borough Council, The Copeland Centre, Catherine Street, Whitehaven CA28 7SJ).

The West Cumbria MRWS Partnership also has a Facebook Page and a Twitter profile. You can find these at: http://on.fb.me/fbZzir or by following @westcumbriamrws on Twitter.

7. Frequently asked questions

- The following information is based on information provided by the Nuclear Decommissioning Authority.

Q. What is it that gives the Nuclear Decommissioning Authority (NDA) the confidence that a geological disposal facility would be safe?

A. The NDA says the fundamental basis to the safety of a geological disposal system is what is described as the multi-barrier system and that this approach is common in all of the geological disposal facilities being designed or considered in other countries.

The multi-barrier system comprises the following:

- The waste form into which waste is conditioned to make it suitable for disposal. This is mostly achieved by either grouting it with cement (intermediate level waste) or vitrifying it in glass (high level waste).
- The waste container provides a physical barrier and enables the waste to be transported and handled safely during interim storage and then for emplacement in a GDF.
- The buffer or backfill is the material that is placed immediately around the waste containers providing physical protection of the waste containers and in some cases a chemical barrier.
- Mass backfill is the material used to fill the excavated access tunnels, shafts or drifts in a disposal facility.
- Sealing systems complement the mass backfill and controls the movement of fluids along the excavated access tunnels, shafts or drifts.
- The natural geological barrier is the host rock in which the facility is constructed and its surrounding rocks. This could be 200 – 1000 metres deep.

The NDA says the engineered barriers (packaging, vaults and backfill) and the natural barrier (the rock cover) would work together to ensure the necessary levels of safety. They suggest that each of the barriers would provide specific safety functions ensuring isolation or containment of the radioactivity over long timescales.

Q. How does the NDA say that wastes could be transported to a geological disposal facility safely from all over the country?

A. The NDA says that radioactive materials are transported in robust packages that reduce the radiation exposure to workers and the public through shielding and containment.

The regulators have specific requirements for the safe transport of radioactive materials. For example, material must be adequately contained to meet prescribed limits of release under routine, normal and accident conditions of transport. Protection from radiation exposure must also be provided and heat emitted by the decay of radioactive material must be dissipated safely.

The NDA says that over the past 60 years there have been regular movements of radioactive material throughout the UK, including road and rail transport of fuel and spent fuel to and from the nuclear power stations. There have also been many transfers of fuel and spent fuel out of and into the country by sea.

While there have been traffic incidents associated with these transports, the NDA says that none have resulted in the release of radioactive material into the environment.

The NDA argues that their *Geological Disposal: Generic Transport Safety Case* main report demonstrates that the transport operations to move radioactive waste from the waste producers' sites to a geological disposal facility can be achieved safely with radiation exposures below allowable limits.

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