

Ensuring robust decisions and deployable solutions in UK LLW management

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The Nuclear Decommissioning Authority (NDA) is responsible for the decommissioning and site restoration of civil nuclear liabilities in the UK. Our decommissioning programme will last over 100 years and generate approximately 3.8 million m³ of LLW, three quarters of which will be VLLW. As well as decommissioning sites, our estate includes operations, such as power generation at Wylfa and reprocessing and waste management at Sellafield. As a result we have a clear interest in effective and affordable management of low level waste.

This is further enhanced by two important aspects: our role in developing and implementing strategy for the management of nuclear industry LLW in the UK and our ownership of the Low Level Waste Repository, a critical part of the UK's radioactive waste management infrastructure. Disposal capacity at LLWR is a precious resource; recognition of this fact has provided effective leverage to changing the way LLW is managed in the UK.

In 2010 we published the UK Nuclear Industry LLW Strategy which comprised three main themes: the waste hierarchy; making the best use of existing LLW management assets; and, the need for new fit-for-purpose waste management routes. In order to preserve disposal capacity at LLWR we wanted to increase choice for organisations that manage LLW. Regulation of the LLW management has also had to keep pace with and enable this change.

Increasing choice requires an increased focus on making robust, and not always easy, decisions. In the past, "LLW" was simply consigned for disposal at LLWR, now LLW managers have to make decisions between clearance, exemption, reuse, recycling, incineration and disposal. Arguably, these decisions become more finely balanced at the lower end of the LLW spectrum.

In the UK, a number of tools and sources of support are in place to help with this process, including: the National LLW Programme; good practice guidance (industry led) on assessing Best Available Techniques; and a continuing emphasis on waste management planning and improving characterisation.

In developing the UK Nuclear Industry LLW Strategy we determined factors that will influence these decisions and can be used to change behaviours. These include: supply chain involvement and development; market forces; economies of scale; Regulatory and stakeholder pressures, and incentivisation through contracts and pricing. Three and a half years into implementation of the UK Nuclear Industry LLW Strategy we have seen all of these factors at work.

Waste-stream specific decisions are ultimately the responsibility of the waste manager. NDA is however bound to take into consideration safety, security, cost and the environment in the delivery of our mission. This means we have an ongoing role, along with other organisations, in providing the tools to support waste managers in making the right decisions and creating an environment in which, once made, those decisions can be effectively implemented.