

LLW REPOSITORY LTD REPORT TO THE WEST CUMBRIA SITES STAKEHOLDER GROUP ON THURSDAY 2ND APRIL 2008

This is the first time the Low Level Waste Repository has reported to the West Cumbria Site(s) Stakeholder Group as an independent Site Licence Company (SLC). As it is our first report to the group, it is considered appropriate to provide a summary of activities undertaken since UK Nuclear Waste Management took over the running of the site on 1st April 2008.

In our tender submission we said we would optimise the approach to Low Level Waste (LLW) management from both the NDA Decommissioning and Clean-up Programme and the National Estate. We identified a number of ways in which we would do this:

- By assisting the NDA in the development of a National Strategy for Low Level Waste.
- By safe management of the LLWR site so that treatment and disposal routes are available.
- By assisting the consignors so that the right waste goes to the right place.

There have been a number of accomplishments since our Contract signing on 1st April 2008. Numerous innovations have been initiated on several fronts, while simultaneously maintaining a stellar safety and environmental compliance record of achievement. These major accomplishments are as follows:

- ✓ Developed the first-ever five year Life Time Plan baseline for the LLWR.
- ✓ Conducted a rigorous assessment of LLWR capabilities, issues, and current plans and programmes.
- ✓ Established with NDA a National LLW Strategy Group as a collaborative and consultative forum for integrating a National LLW Programme.
- ✓ Developed and issued several key strategic documents that form the “blueprint” for the future in LLW management.
- ✓ Established a new, enhanced Consignor Support Organisation.
- ✓ Commenced LLW management services for metal recycling and treatment.
- ✓ Accelerated construction of Vault 9 to ensure continued and uninterrupted LLW storage at LLWR.
- ✓ Completed decommissioning of potential high-risk remediation projects.
- ✓ Revamped management systems for project management, business & financial reporting, and procurement of services.
- ✓ Significantly progressed and accelerated Environmental Safety Case assessments and key deliverables.

Five-Year Life Time Plan

A five-year detailed Life Time Plan was developed in August 2008. The components of the plan, gathered together, for the first time, a comprehensive underpinning of the work to be performed in managing the LLWR site. The plan represents the first, multi-year, bottoms-up description of the work to maintain LLW management and disposal for the entire UK. It identifies the scope, schedule, and budget necessary to deliver several important elements of our on-going Repository mission:

- Continues the foundation for a strong safety and regulatory-compliant programme at the LLWR site.
- Construction of Vault 9 to fill the short-term capacity gap.
- Robust development and delivery of the Environmental Safety Case to allow operations beyond 2013. The ESC is to be submitted in 2011.
- Maintenance and operations of the plant to support uninterrupted waste disposal capability.
- New initiatives for waste treatment options, waste segregation and alternative disposal for very LLW.
- Introduction of new containers and transportation services for more efficient waste handling and disposal.
- Establishment of an integrated National LLW Programme.

Assessment of Capabilities

As part of a comprehensive due diligence process we undertook a rigorous review of all aspects of Repository activities.

The primary objectives for the due diligence assessment were to understand current activities, liabilities and plans for the LLWR Site License Company with minimum impact to the ongoing site operations. The review also afforded the due-diligence team to meet the incumbent workforce and assess its unique capabilities, the breadth and depth of the organisation, and determine any current gaps in the overall needs and requirements at the LLWR.

In completing this task 14 separate categories of investigation were conducted generating 1,437 lines of enquiry:

- Human Resources
- EH&S and Security
- Quality Assurance
- Waste Management
- Maintenance
- Site Infrastructure
- Programme Management
- Project Management
- Financial
- Information Technology
- Conditions for Acceptance (CFA)

- Licence Compliance
- Engineering and Technical
- Site Closure

Actions resulting from the recommendations from the 1,437 lines of enquiry have all been addressed, implemented and closed out.

National Low Level Waste Strategy Group

As part of the national remit to assist NDA in the development of a UK-wide strategy for Low Level Waste Management, the LLWR SLC has the following remit:

- Provide assured storage and disposal for LLW and evaluate diversified management solutions for UK LLW.
- Establish a National LLW Strategy Team to support NDA's role of developing and implementing the UK nuclear industry LLW Strategy and UK LLW Management Plan.
- Provide enhanced support to LLW Consignors to effectively implement the UK LLW strategy and management plan.

Following our tender recommendation, the NDA established a UK-wide National LLW Strategy Group in April 2008 to develop a working partnership between NDA, LLWR, Regulators, key stakeholders and LLW consignors for promoting innovation, value for money, and implementing the waste hierarchy by planning for effective solid waste management solutions.

The Strategy Group integrates LLW management at the independently-managed NDA sites and other nuclear facilities to develop and consult on recommendations for best business practices, economies of scale, standardisation, and the implementation of the entire waste hierarchy throughout the UK. A primary goal of the Strategy Group is to minimise overall waste management costs, optimise transportation logistics, and minimise waste volumes for disposal at the LLWR and other facilities as applicable.

Information and recommendations developed and discussed at Strategy Group meetings is available on the LLWR web site and is shared with other applicable groups and forums involved in LLW issues including the WCSSG.

Enhanced Waste Management Services

LLW Repository Ltd currently provides limited waste management services to its customers across the UK which covers more than 50 consignor sites. The customer base consists of nuclear industry and non-nuclear industry waste producers including:

- Nuclear sites owned by the Nuclear Decommissioning Authority (NDA)
- Public sector bodies, such as the Ministry of Defence (MoD)
- Private sector businesses, such as medical, research or nuclear services

To support consignors in the implementation of the waste hierarchy, ensure effective waste management and reduce the LLW liability to the NDA, LLW Repository Ltd is implementing plans to offer a full portfolio of waste management services to all consignors throughout the UK. The portfolio of waste management services is being delivered by a new Consignor Support Team. This dedicated team provides a central focus for all customer related activities and covers Service Development, Service Delivery, Assurance and Oversight.

Strategic assessments completed to date indicate that the volume of LLW requiring disposal, compared to current forecasts, can be dramatically reduced through proactive implementation of the waste hierarchy.

Vault 9 Construction

Construction of Vault 9 will provide an additional 100,000 m³ of much needed LLW storage capacity when it is completed towards the end of 2009. By phasing construction of the project we can provide uninterrupted waste storage capacity as the previous Vault 8 reaches full and undergoes closure. Interim storage of LLW at one end of the Vault 9 cell will include segregated waste metals, combustibles, and VLLW.

It should be noted that provision of this capacity must be consistent with the evolving Environmental Safety Case (ESC) for the site. The ESC must demonstrate that the radiological risk from the site is acceptable over an extended period of time beyond closure of the facility. Cumbria County Council has accepted the national role of LLWR on the basis of NDA and LLWR Ltd. initiatives for reducing the proportions of LLW that are consigned to LLWR for disposal

Decommissioning of Higher Risk Projects

An accelerated remediation project was initiated in 2008 to empty LLWR storage magazines containing 148 Hex Cylinders and 196 Hex residue drums. These containers presented a significant chemo-toxic and radiological hazard to the site, due to their suspected Uranium Hexafluoride content.

After confirming that the items were suitable for disposal as LLW, and in agreement with the Environment Agency requirements, the preferred disposal route of in-vault grouting was identified. This disposal option utilised otherwise unusable space in vault 8 and removed the need for transportation of hazardous materials on the public highway.

During the nine-month retrieval period and an additional two months to complete disposal operations, a variety of complex handling, transport, and lifting operations were safely performed. All activities were achieved without any radiological or safety incidences. The final cylinder was safely encased in concrete on 20th January 2009, thereby reducing the overall hazard associated with the LLWR site.

Improved Management Systems

We have initiated a number of improvements to the business systems that are used to support day-to-day operations of site programmes at LLWR. These business systems include Financial Accounting and Reporting, Project Controls, Procurement, and Project Management. An approach called **Partner Assess Innovate Step-change (PAIS)** was utilised to tackle this significant improvement plan.

PAIS Teams, comprised of recognised experts with the Consortium companies, were marshalled to identify, recommend, and implement the efficiency and quality changes for Programme Management at the LLWR.

The PAIS efforts resulted in significant savings in terms of monetary savings and efficiencies in personnel work time. Improved, fit-for-purpose business systems will enhance product quality, minimise duplication and redundancy, update and modernise Information Technology (IT) capabilities, and operate more efficiently for lifecycle performance.

Emerging Environmental Safety Case

Currently LLWR has disposal authorisation for LLW waste packages in Vault 8. It is no secret that the Environment Agency (EA) has only granted permission for storage of LLW in the newly constructed Vault 9. In order to get the EA's and the Planning Authority's permission to turn that storage authorisation into disposal, we need to justify to them that it will be safe to leave the waste there once the Repository is closed. The justification will be provided by an Environmental Safety Case (ESC), which needs to be delivered by May 2011.

Considerable progress has been made over the last year in developing our new ESC. Experts in repository performance assessment acquired through "reach back" to the parent group thoroughly reviewed the Lifetime Project developing the Safety Case. This helped in developing detailed plans to ensure delivery of the Safety Case by 2011. The work programme has been renamed the Environmental Safety Case (ESC) Project. A new Project Manager has been appointed along with a new Project team.

Technical development work has continued at an aggressive pace. A major deliverable was provided to the Environment Agency in May 2008, against a requirement in our Authorisation from the EA. This was a major stepping stone to the 2011 ESC. The technical approach to be used in developing and presenting the 2011 ESC has been set out in a new document and work initiated to implement the approach. We have started to look in detail at the implications for long-term safety of the innovations proposed for waste treatment and packaging.

One area where local stakeholders have expressed a concern about long-term safety is whether we know enough about the actual wastes that were disposed to the Repository during early operations (1960s and 1970s). We have engaged an independent company to interview existing and retired staff from Sellafield and the LLWR who were involved in consigning waste to the Repository during the early years in order to improve our understanding of the waste inventory.

Conclusion

In concluding this overview of activities at the LLW Repository I would like to express my sincere thanks to our employees, consignors and regulatory colleagues - particularly those involved in the sometimes gruelling and frenetic workload generated by our rigorous review of LLWR operations.

We have laid the foundations for success we now need to build upon those foundations and deliver against our promises to ensure that the UK makes the most of a national asset extending its life well into the future.

Dick Raaz
Managing Director
LLW Repository Ltd

13/03/09