

RADIOACTIVE WASTE MANAGEMENT: LOCAL AUTHORITIES AND REGULATION

Seminar report, June 2014

Introduction

This report provides an overview of the presentations and discussion at the annual NuLeAF seminar which took place in Local Government House on 16 June 2014.

The purpose was to:

- promote understanding and discussion of the interaction between regulators and local government in radioactive waste management;
- highlight developments in strategies and policies relevant to local government; and to
- identify the key issues for NuLeAF to pursue on behalf of its member authorities

The seminar agenda is attached as [Annex A](#). Speaker presentations are available on the NuLeAF [website](#). The participants list is attached as [Annex B](#). The information sheet is attached as [Annex C](#).

In total 43 people participated in the seminar, including representatives from 24 local authorities. Participants also came from DECC, the Environment Agency, Kingston University, Magnox Ltd, NDA, Radioactive Waste Management Ltd, an independent consultancy and a Parish Council.

Key points from the presentations and question and answer sessions

Presentations by Environment Agency and Office for Nuclear Regulation

Environment Agency (EA): Dr Juliet Long spoke of the importance of establishing a robust infrastructure for radioactive waste management in the UK. She highlighted that society is responsible as a whole for the waste which has been generated as we will have benefited indirectly from its creation as a by-product of industries such as electricity generation. At present the infrastructure is fragile and she would like to see local authorities doing more to increase the provision of a sustainable solution through their planning policies.

Following an overview of permitting and its application to radioactive waste management, Dr Long went on to outline the Environment Agency's role in scrutinising the Environmental Safety Case for the Low Level Waste Repository (LLWR). Key issues included the methods used to dispose of the waste earlier in the sites operational life and the proximity of the Irish Sea and the threat of coastal erosion. However, Dr Long described how the Safety Case had indicated that many of these issues could be managed and that the Environment Agency was currently determining an application by the site to allow further disposals to continue. She explained that should any such permit be issued it would likely be more constrained in terms of the types of wastes that the LLWR may receive and that this would place more pressure on the need for alternative routes for the management of radioactive wastes.

Office for Nuclear Regulation (ONR): Kulvinder McDonald gave an overview of the work of the ONR, who regulate all aspects of on-site management of radioactive waste (including on-site storage) at nuclear licensed sites. The current issues it is addressing are:

- hazard and risk reduction (at legacy facilities, in materials consolidation, the safe management of nuclear materials, and land quality management);
- geological disposal of higher activity wastes; and
- generic design assessment of reactor designs for new nuclear build.

She highlighted that regulation has come a long way in the 50-60 years of nuclear operations and that it will continue to develop to meet long-term challenges.

Questions to Environment Agency and Office for Nuclear Regulation

Q: How does the regulatory framework apply to historic disposals of radioactive waste?

A: Historic 'disposals' of radioactive waste are regulated under the Town and Country Planning Act (through development control over any issues of legacy land contamination) or in accordance with Part IIA legislation (as Radioactive Contaminated Land). Property that is contaminated with radioactivity is not in itself 'radioactive waste'. Any work undertaken on the land that results in the generation of radioactive waste (e.g. digging up radioactively contaminated soils) would require a permit from the Environment Agency (for their accumulation and disposal). No sites in England have been designated as Radioactive Contaminated Land under Part IIA legislation.

Q: With the cuts in staffing/budgets, are there enough people with the right skills and training to do the jobs required?

A: (JL) This is a key issue. There are few courses which generate people with radiation protection skills let alone skills needed to understand the environmental fate of radionuclides in the environment (e.g. geochemists and hydro-geologists). In this context it is to be welcomed that government tasked NDA to set up the National Skills Academy for Nuclear (NSAN). NSAN help highlight the need for key skills in supporting nuclear decommissioning and clean-up, including radioactive waste management. The EA has staff with sufficient skills at present and have developed a strategic workforce plan to help ensure that they continue to maintain the right mix of skills and resources to deliver their regulation, for example by actively supporting the 'nuclear graduates' scheme and ensuring that their salaries remain competitive. (KM) ONR is looking at a variety of ways to meet its people skills challenges, including tapping into the NDA graduate programme and recruiting, and training staff who have some technical expertise but not necessarily from the nuclear industry.

Q: To what extent are the regulatory bodies contributing to policy development for the Geological Disposal Facility?

A: Policy making is a matter for government. However EA is keen to support government in ensuring that robust policy is in place. Government has set up a framework for engagement with the regulators (through the Radioactive Substances Policy Group) and there is a collaborative culture of working together on key issues. EA has provided support and input into the revised siting process, for example attending Government-led stakeholder events during their consultation in order to help explain the role of the regulator. They have also, through their work with the NDA, sought to encourage development of the HAW strategy more generally. ONR has no vires at the moment as there is no licensable site. However, it is contributing to the MRWS process: exploring the regulators role to help with debate and working with RWM and EA on disposability issues.

Q: Many people involved in regulation have worked in the same industry all their lives. In light of this, how do you encourage fresh thinking?

A: One of the ways ONR is approaching this challenge is to recruit people from outside the nuclear industry who have some technical expertise and provide them with appropriate training.

Presentations by Magnox Ltd and Augean plc

Magnox Ltd: Dr Stephen Wilmott gave a presentation on the optimisation studies for storage of Intermediate Level Waste (ILW) and treatment of Fuel Element Debris (FED). Previous thinking had been to store ILW on each nuclear-licensed site. However, in line with current NDA strategy consideration has been given to "share current and planned storage assets to improve value for money, reduce the

environmental impact of new store build and impact on decommissioning timescales." A programme of stakeholder engagement was carried out in 2013, with members of local government from around the affected sites participating in two workshops to provide input in order to identify credible and preferred options. The result is transfers between sites on a regional basis, with only Oldbury not being a recipient of any wastes for treatment or storage. Following feedback from stakeholders NDA is currently considering whether to adopt the preferred option proposed.

Augean plc: Dr Gene Wilson gave an overview of the company, of which the Radioactive Waste Services is its newest division. He went on to review the application process for Very Low Level Waste disposal at the East Northants Resources Management Facility at King's Cliffe, and the operation of the site and process for management of waste disposal. Dr Wilson outlined the concerns which had been raised by the local community during the application for planning and environmental permitting and how Augean continued to engage with the local community.

Looking ahead, Augean is seeking to invest in the radioactive waste management market and recognises the need for robust planning policy, underpinned by sound local plans, to provide a good level of certainty.

Questions to Magnox and Augean

Q: Who generates the waste which is disposed of at ENRMF?

A: The vast majority comes from the nuclear industry. There is growth in the market for NORM wastes and the amount of this waste form which will be generated in coming years is underestimated. Waste Plans need to recognise the potential for a substantial increase in volume of NORM waste. There is also a certain amount of contaminated land which is disposed of at ENRMF.

Q: Most waste is packaged when it arrives for disposal – do you have input into the way it is packaged?

A: The consignor has to agree with Augean the form in which the waste will be delivered. Packing can be steel drums, ISO containers and bags. Other forms can be taken subject to EA approval. Once waste is placed and a record is kept of where it is disposed of using GPS, how it was packaged and what it contains. Acceptance is contingent upon the waste consignor providing all the necessary details.

Q: What, in your experience, do you think a sound local plan should contain?

A: Policy should be based on proper criteria – environmental and community. Local policy should not duplicate policy elsewhere i.e. restating requirements of consignor's Waste Management Plans.

Q: How is the transportation issue considered? Is it based on locality or sustainability?

A: Both issues are addressed. The impact of transport is considered in the Environmental Impact Assessment. The proximity principle determines that the waste should go to the nearest available suitable facility. The proximity principle is considered in consignors Waste Management Plans and in BAT assessments for each waste stream.

Presentations by NDA and DECC

Low Level Waste Strategy Review: David Loudon outlined the key successes since the LLW Strategy was accepted by government in 2010. These included a better understanding of the radioactive waste inventory and the improved application of the waste hierarchy. In addition, implementation of the latter has extended the operational life of the Low Level Waste Repository. Site Licensee Companies have produced Joint Waste Management Plans which forecast waste arisings for the next 5 years.

Mr Loudon went on to outline the scope of the review, the process and the opportunities for stakeholder engagement. The aim is to produce the revised review in August 2015 ahead of publication of NDA Strategy 3 April 2016.

UK Strategy for Solid Low Level Waste Part II – Naturally Occurring Radioactive Materials: Colin Mackie presented an overview of how and where NORM waste is generated. A data collection exercise had been undertaken under the lead of Scottish Government to ascertain the predicted waste arisings and produce a 'pen portrait' of how the waste is managed in each industrial sector. Although there are treatment and disposal facilities throughout the UK, the infrastructure is fragile as options are limited. The data collected during development of the strategy has provided the most complete picture of current and projected NORM waste arisings to date. Some uncertainty remains however in certain NORM producing sectors.

Mr Mackie went on to talk about the strategic issues faced, and the objectives the department had set in order to deal with these issues. Government aims to support continued improvements in data gathering processes, clarify issues around the

regulation of treatment and disposal facilities for NORM wastes, and support the removal of barriers to market development.

Questions to NDA and DECC

Q: What scope is there for change in next LLW strategy?

A: The fragility of the supply chain, encouraging new entrants and the maintenance and support of the supply chain are all issues which need to be considered.

Q: What is the proposed technical solution for taking radon out of water from fracking?

A: (JL) EA would be responsible for the permitting of radioactive wastes that may result from shale gas production and associated activities. However, this would not include radon which is not a listed radioactive species in the definition of radioactive waste under the Environmental Permitting Regulations. Instead, controls over radon exposure are dealt with under Health and Safety legislation. Radon action plans are developed by Public Health England

Q: What is the understanding of wider EU and international experience of GDF?

A: (JL) GDF development programmes are under way in a variety of countries and at varying stages, e.g. in Finland Sweden, Switzerland, Canada. An operational GDF (the Waste Isolation Pilot Plant (WIPP)) exists for the management of some higher activity radioactive wastes in the USA. The EA is in touch with the regulatory bodies and operators in a range of countries, and also contributes to the work of the IAEA and NEA, and this is all important in sharing best practice and developing guidance. Some of the experiences elsewhere reflect differences in the general approach to waste management e.g. a nationally lead approach in some instances rather than supply chain. Learning from the experience elsewhere, for example, has given emphasis to the importance of host community volunteerism.

Broader issues across Europe and elsewhere are also relevant. For example, with accelerated decommissioning in Germany competing with the UK market and potentially taking skills away from any UK supply chain that we may rely on to deliver our own clean up and development of waste management solutions. With luck it could alternatively help incentivise UK industry to invest and become a world leader using experience in the UK to win opportunities elsewhere in due course.

(KM) Would echo JLs comments about developing dialogue between regulators in other countries. RWM also has strong links with comparable bodies elsewhere in the world.

(RS) NDA funded NuLeAF to participate in an EU conference in Vilnius the previous autumn which looked at the international approach to radioactive waste management.

(CM) The UK Government and its advisory body the Committee on Radioactive Waste Management (CoRWM) directly engages with other governments at different stages of the process and learns from their experience.

Q: Regarding the overlap between planning and permitting - what is the requirement for the Waste Planning Authority to be a consultee on Environmental Permit applications and what sort of issues would you like to see covered?

A: Whilst Local Authorities are not 'statutory consultees' to the EA under the Environmental Permitting Regulations, the EA is committed to working together with LAS and consults with them on permits for radioactive substances activities. When an application for planning permission is going on at same time as a permit application, EA would like to see both bodies working together to help streamline the process, and to recognise the respective regulatory vires and interests of one another.

There are no specific issues which EA would like to see planning authorities address, but co-ordinated working is important i.e. each body dealing with separate issues and not addressing those which fall in the remit of the other.

More generally, EA would like to see WPA planning policies opening the door for companies interested in providing radioactive waste facilities to come forward.

Presentation by NuLeAF

NuLeAF: Philip Matthews, Executive Director of NuLeAF provided an overview of NuLeAF's work and how it would be working with the organisations who had given presentations at the seminar, and others, in order to address the issues raised during the day.

He also looked forward at some of the main developments that would be likely over the next 12 months. Of central importance will be the announcement of the Government's new approach to developing a GDF. Also important will be the new NDA HAW Strategy, Strategy III, the UK NORM Waste Strategy and revised National Nuclear LLW Strategy. NuLeAF also planned to take forward engagement around community benefits for those areas hosting nationally important decommissioning and waste management sites.

Annex A:

RADIOACTIVE WASTE MANAGEMENT: LOCAL AUTHORITIES AND REGULATION



**Seminar, 16 June, 2014
Local Government House**

Agenda

- 10.30 Registration and coffee
- 11.00 Welcome and introduction (Cllr Richard Smith MVO, Chair, NuLeAF)
- 11.05 Environmental permitting and radioactive waste management (Juliet Long, Environment Agency)
- 11.25 On-site storage and the regulation of radioactive waste: ONR's role (Kulvinder McDonald, ONR)
- 11.45 Discussion
- 12.15 Co-location of Intermediate Level Waste and Fuel Element Debris (Ben Bridgewater or Stephen Wilmott, Magnox Ltd)
- 12.30 Landfill management and Very/Low Level Waste (Gene Wilson, Augean)
- 12.45 Discussion
- 1.00 Lunch
- 1.44 Revision of the UK Low Level Waste Strategy (David Loudon, NDA)
- 2.00 UK Strategy for the management of Naturally Occurring Radioactive Materials (NORM) and the implications for local government and communities (Colin Mackie, DECC)
- 2.20 Discussion
- 2.40 Regulation, strategy and stakeholder engagement (Philip Matthews, Executive Director, NuLeAF)
- 2.55 Discussion
- 3.10 Closing remarks (Cllr Brendan Sweeney, Vice-Chair, NuLeAF)
- 3.20 Finish

Annex B:

RADIOACTIVE WASTE AND SPATIAL PLANNING



Speakers and panel representatives

Juliet Long, *Environment & Business Manager, Radioactive Substances Regulation, Environment Agency*

Kulvinder McDonald, *Superintending Inspector – Nuclear Safety and Professional Lead Radioactive Waste, Officer for Nuclear Regulation*

Stephen Wilmott, *Principal Waste Consultant, Magnox Ltd*

David Loudon, *Integrated Waste Manager, Nuclear Decommissioning Authority*

Colin Mackie, *Head of Radioactive Waste Policy, Department of Energy & Climate Change*

Gene Wilson, *Director of Corporate Stewardship, Augean Ltd*

Delegate List

Helen Simms	Augean Ltd
Steve Smith	Copeland Borough Council
Clare Feeney-Johnson	Cumbria County Council
Sue Brett	Cumbria County Council
Andy Hill	Devon County Council
Mike Garrity	Dorset County Council
Andrew Stone	Environment Agency
Lesley Stenhouse	Essex County Council
Paul Prowting	Hampshire County Council
Adrian Hurst	Hartlepool Borough Council
David Collier	Independent Consultant
Dr Bahram Ghasseer	Kingston University
Cllr Marcus Johnstone	Lancashire County Council
John Wright	Leicestershire County Council
Cllr Mark Hackett	Manchester City Council
Archie Onslow	North London Waste Partnership
Phil Watson	Northamptonshire County Council
Eilidh McCallum	Nottinghamshire County Council
Trevor Brown	Oxfordshire County Council
Katie Davis	Radioactive Waste Management Ltd
Doug Bamsey	Sedgemoor District Council
Alistair Stewart	Shepway District Council
Bob Mills	Somerset County Council

Tess Bond
Gillian Ellis-King
Dr Jill Sutcliffe
Cllr Andrew Nunn
Clive Pink
Les Andrew
Andrew Morrow
Matthew Meldrum
Cllr Chris Morgan
James Holbrook

Somerset County Council
South Gloucestershire Council
St Breward Parish Council
Suffolk Coastal District Council
Suffolk Coastal District Council
Surrey County Council
West Berkshire Council
West Berkshire Council
West Somerset Council
West Somerset Council

NuLeAF

Cllr Richard Smith MVO, Chair (Suffolk County Council)
Cllr Brendan Sweeney, Vice-Chair (Barrow-in-Furness Borough Council)
Philip Matthews, Executive Co-Director
Catherine Draper, Administrator

Annex C:

INFORMATION SOURCES ON THE MANAGEMENT OF RADIOACTIVE WASTES

NuLeAF Seminar, 16 June 2014

This document is posted on the NuLeAF website (www.nuleaf.org.uk). To access the documents, just click on the hyperlinks below.

1 Government Policy and Guidance

- [Managing the use and disposal of radioactive and nuclear substances and wastes](#)
- [Managing Radioactive Wastes Safely: A Framework for Implementing Geological Disposal](#), please note that a revised White Paper is expected before parliament breaks for recess in July. A link will be posted on the website as soon as it becomes available.
- [Policy for the Long-Term Management of Solid Low Level Radioactive Wastes in the UK](#)
- [Over-arching National Policy Statement for Energy \(EN-1\)](#)
- [National Policy Statement for Nuclear Power Generation \(EN-6\): Volume 1 of 2](#)
- [National Policy Statement for Nuclear Power Generation \(EN-6\): Annexes Volume 2 of 2\)](#)
- [Waste and decommissioning financing arrangements](#)
- [Guidance for local planning authorities on implementing planning requirements of the EU Waste Framework Directive \(2008/98/EC\)](#)
- [Waste management plan for England](#)
- [National Planning Policy Framework for England and planning practice guidance.](#)
- [UK Strategy for the management of Naturally Occurring Radioactive Materials \(NORM\)](#)

2 Regulation

Listed below are hyperlinks to a number of documents which you might find useful.

Environment Agency

- [Guidance on how the Environment Agency regulates radioactive waste](#)
- [The Environment Agency's role in the Nuclear Regulation Group](#)
- [Guidance on the disposal of very low level radioactive waste](#)
- [Guidance on near surface disposal facilities on land for solid radioactive waste](#)
- [Geological Disposal Facilities on land for solid radioactive waste](#)
- [Guidance and information about radioactive contaminated land](#)
- [Radioactive substances regulation for non-nuclear licensed sites](#)
- [East Northants Resource Management Facility \(King's Cliffe\) Decision Document](#)
- [Clifton Marsh Decision Document](#)

- [Discharge of radioactive waste from nuclear licensed sites: setting limits](#)
- [Suitability of radioactive waste disposal assessment and packaging advice](#)
- [Non-nuclear radioactive substances regulation](#)
- [Scrutiny of Radioactive Waste Management Ltd's work](#)
- [Waste acceptance at landfills](#)
- [Guidance for developments requiring planning permission and environmental permits](#)
- [Environmental sector plan for nuclear industry – Issue 3](#)
- [Generic Design Assessment of new nuclear power stations](#)

Office for Nuclear Regulation

- [An overview of the work of the Office for Nuclear Regulation \(ONR\)](#)
- [A guide to nuclear regulation in the UK](#)
- [Joint regulatory guidance on the management of higher activity wastes](#)
- [The ONR's work on the Generic Design Assessment of new nuclear power stations](#)
- [Nuclear site licensing](#)
- [Standard license conditions attached to nuclear licensed sites](#)
- [De-licensing of nuclear sites](#)
- [Regulation of transport](#)
- [The Chief Nuclear Inspector's Annual Report, 2013](#)
- [Scrutiny of Radioactive Waste Management's work](#)
- [ONR's role in geological disposal](#)
- [Land quality management](#)

3 Co-location of waste

- [Preferred Option \(for comment\): optimising the number and location of Interim Intermediate Level Waste \(ILW\) storage facilities on Magnox Limited and EDF Energy sites and Fuel Element Debris \(FED\) treatment \(Dissolution\) facilities in Magnox Limited.](#)
- [NDA response to stakeholder comments on Credible Options proposal](#)
- [Intermediate Level Waste \(ILW\) storage and Fuel Element Debris \(FED\) treatment optimisation study](#)
- [The preferred integrated option – impact at the sites](#)
- [NuLeAF Briefing Paper 23: radioactive waste management and local plans](#)
- [Preferred options for the co-location of ILW storage in central and southern Scotland](#)

4 Landfill

- [East Northants Resource Management Facility \(King's Cliffe\) Decision Document, Environment Agency](#)
- [Clifton Marsh Decision Document, Environment Agency](#)
- [Waste acceptance at landfills, Environment Agency](#)
- [Report to Planning Committee, re acceptance of LLW at Keekle Head, Cumbria County Council](#)
- [NuLeAF Briefing Paper 20: Key issues at the King's Cliffe inquiry](#)

5 Low Level Waste (LLW) strategy review

- [Policy for the Long-Term Management of Solid Low Level Radioactive Wastes in the UK](#)
- [UK Strategy for managing Low Level Radioactive Waste](#), NDA
- [Nuclear Industry LLW management plan](#), NDA and LLWR Ltd
- [NuLeAF Briefing Paper 23: radioactive waste management and local plans](#)
- [National Low Level Waste Programme](#), LLWR Ltd
- [Managing waste – Lower Activity Waste](#), NDA website
- [Managing waste – Higher Activity Waste](#), NDA website

6 UK strategy for the management of NORM

- [Exemption guidance: Guidance for NORM industrial activities on how to comply with the radioactive substances exemption regime](#)
- [Draft UK Strategy for the management of Naturally Occurring Radioactive Materials \(NORM\)](#), consultation document
- [Facts about fracking](#)
- [NuLeAF Briefing Paper 25: radioactive waste management and fracking](#)
- [NORM Strategy](#), SEPA website