LILLYHALL LANDFILL SITE VLLW PROJECT

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RECOMMENDATIONS

To inform Members of the WRG and Energy Solutions intentions to apply to the Environment Agency for authorisation to dispose of radioactive waste at Lillyhall landfill site.

It is recommended that Members consider the report and discuss a policy for Copeland Borough Council in respect of this application and the potential issue of dispersal of nuclear facilities away from the existing sites of Sellafield and the LLWR near Drigg.

1. INTRODUCTION

1.1 Waste Recycling Group (WRG) currently operate the landfill site at Lillyhall, near Workington. The site is permitted to dispose of a wide range of wastes and generally deals with commercial, industrial and household waste.

1.2 Other permitted wastes currently disposed at the site include certain types of Low Volume Low Level Waste (LVLLW) and Naturally Occurring Radioactive Material (NORM). VLLW has been safely disposed of at the site since 1995.

1.3 Following the recent change to government policy Waste Recycling Group (WRG) will be applying to the Environment Agency for an authorisation to dispose of high volume Very Low Level Waste (VLLW) at its Lillyhall landfill site.

1.4 In order to facilitate this project, WRG are forming a 'joint venture'' with Energy Solutions, who have international experience in the disposal of radioactive wastes.

KEY POINTS

2.1 WRG currently have no firm date for submitting the application to the Environment Agency, but expect it to be in late December 2009 or early in the New Year.

2.2 Although currently disposing of VLLW at the Lillyhall landfill site, WRG need to apply for permission to dispose of HVLLW as they currently do not meet the government requirements of waste volumes greater than 50 cubic metres.

2.3 The authorisation being applied for will be limited to a maximum inventory of radioactive waste by the Environment Agency.

2.4 Much of the waste is likely to arise from decommissioning activities at Sellafield however there may be waste from other nuclear sites.

3. CONCLUSIONS

3.1 WRG has formed a joint venture with Energy Solutions to apply for permission to dispose of High Volume Very Low Level Waste (HVVLLW) at its landfill site in Lillyhall. The site has safely disposed of small volumes of Very Low Level Waste (VLLW) since 1995.

3.2 Government policy (March 2007 'Policy for the Long-Term Management of Solid Low Level Waste in the United Kingdom) encourages alternative disposal wastes away from engineered disposal at the LLWR near Drigg.

3.3 The site would receive wastes from both Sellafield and other nuclear sites.

3.4 Members are asked to consider and comment on the report by WRG and Energy Solutions in Appendix 1.

LIST OF APPENDICES

1. Lillyhall Landfill Site VLLW Project – A report by Waste Recycling Group

cc. FMcMorrow
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Background

There are around 30 nuclear industry sites in England and Wales. These include nuclear power stations, Sellafield and Harwell. There are several hundred other users of radioactivity (such as hospitals and universities) which also produce radioactive waste. In the past, solid high volume very low level wastes (HVVLLW) arising from these sites have been sent to the Low Level Waste Repository (LLWR) at Drigg, near Sellafield, for disposal, generally low volume very low level waste (LVVLLW) has traditionally been disposed to conventional landfill.

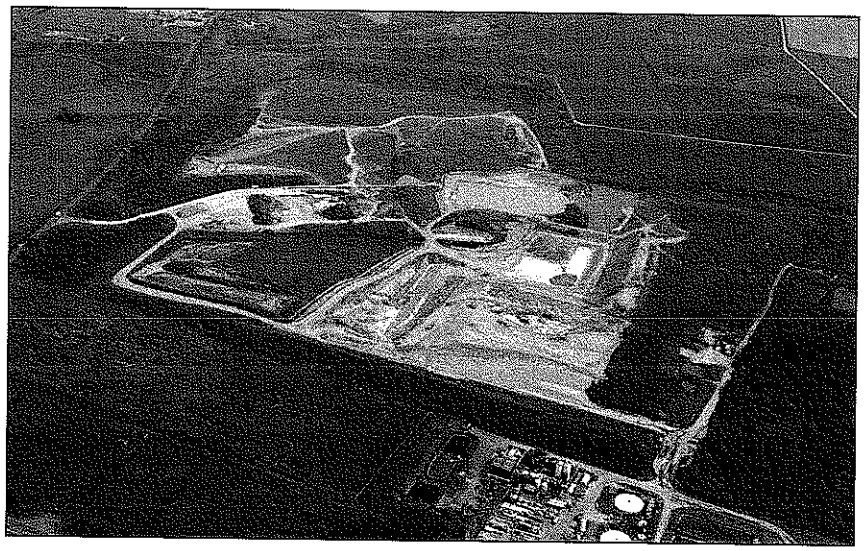
The LLWR has limited capacity which needs to be retained for the higher activity low level wastes for which it was designed. Alternative disposal routes need to be found for high volume VLLW arising largely from the decommissioning of nuclear sites. These are wastes where the level of radioactivity is so low that they can be safely disposed of by other means. This is in line with revised government policy, which proposed alternative disposal routes for HVVLLW which does not need engineered disposal at LLWR near Drigg. 'Specified landfill' sites were identified in particular as an alternative disposal route.

What we are proposing

Following the recent change to government policy Waste Recycling Group (WRG) will shortly be applying to the Environment Agency for an authorisation to dispose of high-volume VLLW arising from the nuclear sector at its Lillyhall landfill site, near Workington.

WRG is forming a joint venture for this purpose with Energy*Solutions*, which has international experience in dealing safely with such wastes.

The Lillyhall landfill site



Lillyhall, which is now owned and operated by WRG, has been licensed as a landfill disposal site since 1972. It deals with household, commercial and industrial wastes. It has an Environmental Permit from the Environment Agency which covers a wide range of wastes, including certain types of LVVLLW and Naturally Occurring Radioactive Material (NORM). VLLW has been safely handled and disposed of at the site since 1995. VLLW is mainly man

made radioactivity. VLLW (low volume), exempt and NORM waste has been handled at the site since 1995.

The landfill site therefore already has on-site radiological contamination and dose monitoring equipment and expertise. In 2004 it handled one of the UK's largest consignments of NORM waste, totalling 3,000 tonnes. It has a large consented void area and is also the closest landfill site to Sellafield.

Lillyhall will continue to accept non-hazardous industrial and commercial wastes for landfilling. HVVLLW radioactive wastes will be an additional waste type within the wide range of waste types already authorised for disposal. The amount of HVVLLW disposed of will depend on the pace of decommissioning at nuclear licensed sites

Asbestos

Asbestos waste is classified as hazardous waste. It has to be placed in separate stable non-reactive monocells and be kept segregated from other waste streams. Lillyhall is the only landfill site in Cumbria licensed to dispose of asbestos. Any HVVLLW containing asbestos would be treated in exactly the same way. HVVLLW to be disposed of at Lillyhall will otherwise be classified as non-hazardous waste.

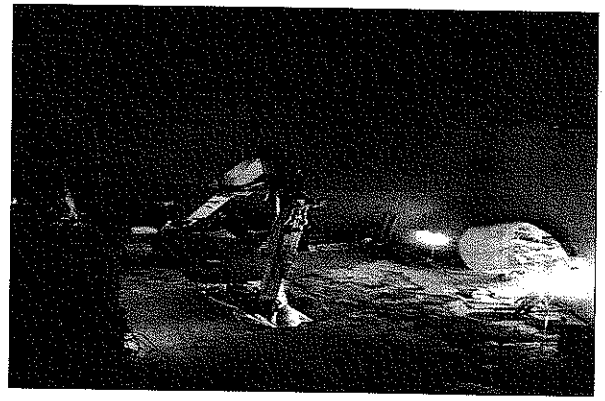
Types of Very Low Level Radioactive Wastes

VLLW is a category of radioactive waste containing only very low levels of radioactivity. It includes both operational and decommissioning wastes. Some materials are contaminated through being present in a radioactive area. Other materials are classified as waste because they arose in a radioactive area but they are not necessarily contaminated.

Nuclear sites are required to minimise the production of waste classified as radioactive and segregate or analyse it before it is can be reused, recycled or disposed of.

Operational (or process) wastes include lightly contaminated clothing, gloves and paper towels from site operations. These come from day-to-day operations carried out in the radioactive areas of nuclear facilities.

Decommissioning wastes are typically high in volume and very low in radioactivity and include lightly contaminated building rubble, such as concrete, soil and steel reinforcing bars, and redundant plant and equipment, such as tiles and ceramics, glass and stone, pumps and pipe work.



Decommissioning waste of this type are likely to form the bulk of the HVVLW to be disposed of at Lillyhall.

Much of the waste is likely to arise from decommissioning activities at Sellafield. There may be waste from other nuclear sites.

Disposal of HVVLLW

HVVLLW will be in solid form. The Environment Agency will specify how it will be disposed of. It may either be dispersed amongst non-radioactive wastes, be segregated in discrete areas of the site, or both. The best methods of disposal within the landfill site will be decided later, taking into account operational flexibility.

A cell for HVVLLW will probably be a sub-cell within a much larger one used for the disposal of non-radioactive wastes. As is normal at landfill sites the disposal cell will be dug out and lined with clay and if appropriate a robust man-made lining material. Once it is filled it will be capped off with soils and clay, again in line with normal landfill practice. The cap will be placed as required by Environment Agency and detailed in the Environmental Permit. The waste will then be safely isolated from the surrounding environment.

Radioactivity

The site will be routinely monitored for levels of radioactivity, as for other non-radioactive contaminants, after disposal, both within the leachate (polluted rainwater that collects at the bottom of every landfill site) and in the surrounding environment.

Companies sending HVVLLW for disposal will be responsible for sorting and checking the waste at their premises, in line with statutory requirements. WRG will conduct checks as the waste arrives at site, and the Environment Agency will conduct random verification checks as part of their regulatory responsibilities.

Transport

Within the UK the total quantities of HVVLLW that might be disposed of to landfill are very small in comparison to the quantities of conventional (non-radioactive) waste. There should not be a noticeable increase in traffic to any landfill. It will be for the consignor to agree with WRG the most appropriate mode of transport. WRG considers the risk from HVVLLW to be so small that special arrangements for its transport are not necessary.

The Lillyhall landfill site has good road access, and is close to rail and port terminals for alternative delivery routes.

The Companies

Waste Recycling Group Limited, a leading UK waste management and energy recovery company (www.wrg.co.uk), is part of Fomento de Construcciones y Contratas (FCC), the international construction and services group (www.fcc.es). It operates waste facilities throughout the UK.

Energy*Solutions* is a US company, with its headquarters in Salt Lake City, Utah which provides comprehensive integrated services and solutions to the nuclear energy industry (www.energysolutions.com). It has a track record of successful stakeholder engagement leading to the safe, cost effective, accelerated clean-up of nuclear sites. Energy*Solutions* has a long-term commitment to the nuclear sector in the UK.

Frequently Asked Questions

When will you be submitting the application?
We do not yet have a firm date as preparatory work still needs to be undertaken. It will either be late in December or early in the New Year.

What is the policy driver behind this move?
The Government wants alternative disposal routes for HVVLLW which do not need engineered disposal at LLWR at Drigg. This proposal is totally in line with Government policy.

The Nuclear Decommissioning Authority (NDA) draft Business Plan for 2009-12 is currently out for consultation. In line with Government policy this encourages the development of commercial landfill routes for management of HVVLLW.

The 'specified landfill' disposal option was identified in the March 2007 'Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom' document published by DEFRA (www.defra.gov.uk). This is consistent with that policy and in no way pre-empts the NDA consultation.

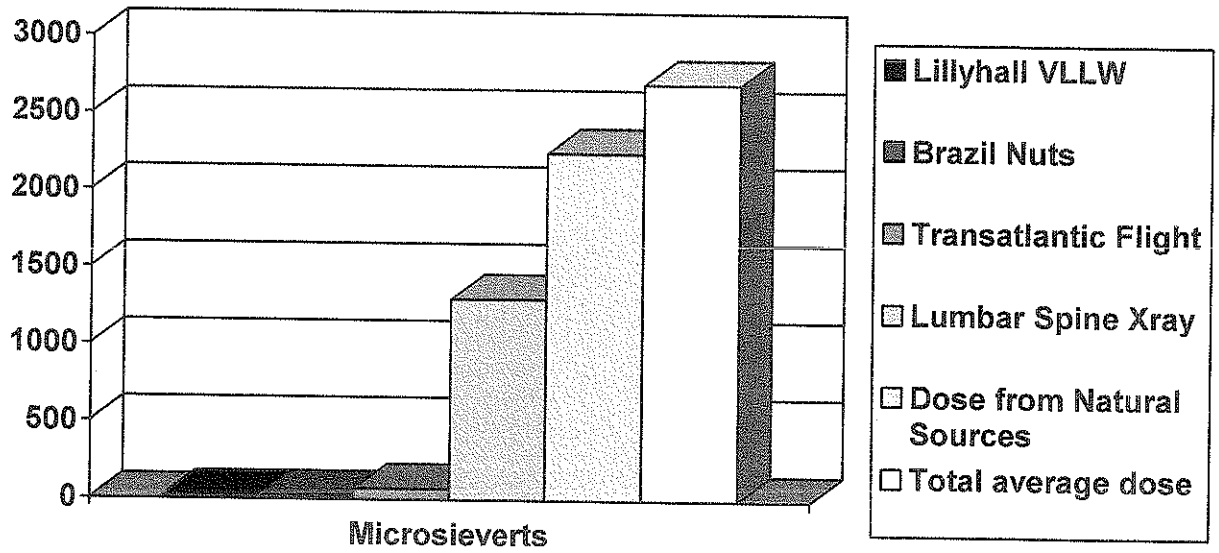
If you have been disposing of HVVLLW at Lillyhall since 1995, why do you need a new authorisation?
We have been disposing of exempt and LVVLLW since 1995. The EA is defining high volume very low level waste as >50m3, and the receiving landfill requires an authorisation. So the concept of disposing of VLLW to landfill is not new.

Will the Lillyhall site and the HVVLLW cell be limited to a total amount of radioactivity?
Yes. The RSA Authorisation will stipulate the maximum inventory of radioactivity that will be permitted. This will be determined by the EA during the determination of our application.

What quantities of HVVLLW do you envisage being disposed of at Lillyhall?
Government policy refers to 'the proximity principle'. In essence this means wastes should be disposed of as close to where they are being generated as possible. The major source of VLLW will therefore be Sellafield.

What are the risks to the community of receiving HVVLLW at Lillyhall; can these be put into context?
The potential risks to the public are extremely low.

Dose received



Will there be any benefits for the local community?
WRG has a separate body called WREN (Waste Recycling Environmental Ltd) which is independent of the main company. WREN is an environmental body distributing money from the landfill tax credits that are recovered by WRG through the Landfill Communities Fund. Now in its 11th year, it distributes £15 million annually to qualifying community and environmental projects within 10 miles of a WRG landfill site across the UK.

More than £167,000 has been committed to community projects within 10 miles of Lillyhall since WRG acquired the landfill in 2005. A total of more than £276,000 has been committed to projects in West Cumbria as a result of landfill tax credits raised from operations at Lillyhall and Bennett Bank Landfill, near Barrow-in-Furness, since 2004.

Will you be receiving HVVLLW from other nuclear facilities elsewhere in England, or from Wales and Scotland?
Government policy is likely to lead to the development and licensing of further VLLW disposal sites in other parts of the UK. We anticipate the Lillyhall facility will receive HVVLW wastes from within a 50mile radius of the site.

Will you be importing VLLW from overseas to Lillyhall?
No.

If WRG is licensed to deal with these wastes already and has the equipment, what role is Energy*Solutions* playing?
Energy*Solutions* will be supplying extra technical expertise, based on its extensive experience in the USA and particularly in VLLW disposal. Some of the VLLW waste will be generated on NDA sites managed by Energy*Solutions* that are currently being decommissioned within the UK.

What is NORM?
NORM stands for 'Naturally Occurring Radioactive Material', which largely arises from the oil and gas industry.