

## R&D / Innovation

Project Name	site	SLC	contact	email	phone
<b>Grouting process improvements</b>	LLW Repository	LLW Repository Ltd.	Jonathan Evans	jonathan.evans@llwrsite.com	019467 22241
ID	description				
R&D13-38	LLW Repository Ltd working with Nexia Solutions have carried out research to improve the grouting recipe for treatment of low level waste at the Low Level Waste Repository. This work is aimed at improving the range of plasticisers that can be used in the grouting process to allow competitive procurement activities to take place. The work has also helped improve the knowledge of the grout recipe and the factors that influence successful grout production.				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
Innovation	LLW	general/mixed	Storage		
Project status	Partnering	Budget	Date started		
new	N/A	N/A	N/A		
<b>Ferrous Melting Trials</b>	Sellafield	Sellafield Ltd	Laurence Cook	laurence.cook@sellafieldsites.com	LLW
ID	description				
R&D15-1	Ferrous Melting Trials - Trial load of ferrous material sent for recycling to Studsvik Sweden				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	LLW	metallic	Decontamination		
Project status	Partnering	Budget	Date started		
implemented	N/A	N/A	N/A		
<b>Lead Melting trials</b>	Sellafield	Sellafield Ltd	Laurence Cook	laurence.cook@sellafieldsites.com	019764 86392
ID	description				
R&D15-2	Lead Melting trials - Trial loads of contaminated lead shielding sent for recycling to Studsvik Sweden and Energy Solutions USA				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	LLW	metallic	Decontamination		
Project status	Partnering	Budget	Date started		
implemented	N/A	N/A	N/A		
<b>Oil Incineration Trials</b>	Sellafield	Sellafield Ltd	Laurence Cook	laurence.cook@sellafieldsites.com	019764 86392
ID	description				
R&D15-3	Oil Incineration Trials - 40 m3 contaminated oils sent to Studsvik for incineration trials.				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	LLW	Liquid	Sorting/minimization		
Project status	Partnering	Budget	Date started		
new	N/A	N/A	N/A		
<b>new treatment methods for "Orphan residue" streams</b>	Springfields	Springfields Fuels Ltd	D Beaumont	Dave Beaumont/Fuel/Springfields/BNFL@BNFL	01772 764676
ID	description				
R&D17-1	SFL are working with National Nuclear Laboratory (NNL- formerly Nexia Solutions) at Springfields, on a number of projects. These include sampling and analysis of material in conjunction with development of new treatment methods for "Orphan residue" streams (ie. uranic radioactive material without a processing or disposal route). One example includes development of a method for cleaning contaminated oils and solvents using an acid wash process. These materials are not radioactive wastes				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
Innovation	VLLW	Liquid	Decontamination		
Project status	Partnering	Budget	Date started		
new	NNL (formerly Nexia Solutions)	96000	01/04/2008		
<b>Development work on uranic residues types coded PDA (asbestos) and RCF (refractory ceramic fibres).</b>	Springfields	Springfields Fuels Ltd	D Beaumont	Dave Beaumont/Fuel/Springfields/BNFL@BNFL	01772 764676
ID	description				
R&D17-2	Development work on uranic residues containing asbestos (coded PDA) and refractory ceramic fibres (RCF). This includes sampling, lab analysis and characterisation of samples. Additionally, testing of potential routes at laboratory scale with emphasis on potential options for destroying or rendering harmless any conventional safety issues, thereby enabling more conventional processing to be considered. These materials are not radioactive wastes. A primary aim is to develop routes to process these materials and avoid the creation of LLW				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
Innovation	VLLW	general/mixed	Decontamination		
Project status	Partnering	Budget	Date started		
new	Nexia	52000	01/05/2008		
<b>Combined heated detergent / nitric acid washing process</b>	Springfields	Springfields Fuels Ltd	D Beaumont	Dave Beaumont/Fuel/Springfields/BNFL@BNFL	01772 764676
ID	description				
R&D17-3	To assess suitability of "De-red" wipes (cloth impregnated with organic liquid) for a nitric acid washing process. It is noted that material contaminated with organics is not currently suitable for treatment (for disposal at Clifton Marsh) through EURRP and so further work looking at a combined heated detergent / nitric acid washing process within Nexia facilities. These materials are not radioactive wastes. A primary aim is to develop routes to process these materials and avoid the creation of LLW				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	VLLW	combustible	Decontamination		
Project status	Partnering	Budget	Date started		
new	N/A	30000	01/04/2008		
<b>Treatment of depleted and Natural oily residues</b>	Springfields	Springfields Fuels Ltd	D Beaumont	Dave Beaumont/Fuel/Springfields/BNFL@BNFL	01772 764676
ID	description				
R&D17-4	Depleted and Natural oily residues - In 2005/06 the decision was made to abandon the incineration route for trial pre-processing the oily residues and hence an alternative was required. Investigations were undertaken and the decision made to look for suitable offsite processing. There is work ongoing looking at using non-incineration thermal processes and it is expected that a contract will be placed in the future. These materials are not radioactive wastes. A primary aim is to develop routes to process these materials and avoid the creation of LLW with the potential to despatch the materials overseas without material return				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	LLW	general/mixed	Disposal		
Project status	Partnering	Budget	Date started		
new	N/A	£7.9M	01/04/2008		
<b>Cyclone residues</b>	Springfields	Springfields Fuels Ltd	D Beaumont	Dave Beaumont/Fuel/Springfields/BNFL@BNFL	01772 764676
ID	description				
R&D17-5	Cyclone residues - There is a significant quantity of clean uranium in these residues which has the potential to be converted into UF6. A previous study indicated that the use of onsite facilities was the BPEO to deal with these residues. Initial trials were done to process the material through the magnesium reduction furnace, however the resulting material was not easily processed through A336 so further work was undertaken to improve the reaction product (uranic billets) in order that it may be processed through A336. Billet production and dissolution trials are still ongoing. These materials are not radioactive wastes. A primary aim is to develop routes to process these materials and avoid the creation of LLW. Note initial budget was within orphan residues provision - now transferred to A336				
R&D / Innovation	1 waste category	2 waste type	3 waste life cycle		
R&D	LLW	metallic	Segregation		
Project status	Partnering	Budget	Date started		
#N/A	N/A	~£2M	01/04/2008		