



## **Tetronics Supports Sellafield with Nuclear Decommissioning Research – Potentially Delivering Significant Economic Benefit to the UK**

*Tetronics has been commissioned to run trials for Sellafield Ltd using its plasma technology to convert a simulated Intermediate Level Waste (ILW) into a stabilised form with a considerable level of volume reduction.*

**London, March 22<sup>th</sup>, 2011** – Tetronics Ltd., a global leader in the supply of Direct Current (DC) plasma waste recovery plants for the treatment of hazardous waste and metal recovery, today announced that it has been commissioned by Sellafield Ltd to run trials on a range of simulated intermediate level metallic solid wastes including, containers, plant equipment and structural materials that mimic the behaviour of material that has been irradiated or contaminated during its operational life on the Sellafield site. The purpose of this trial is to confirm the viability of plasma technology in the immobilisation of high metallic solid wastes.

Waste management activities for radioactive wastes across the Sellafield site include characterisation retrieval, stabilisation treatments, packaging and interim storage of historic legacy materials as well as current wastes arising from their commercial and decommissioning operations. Nuclear waste falls into three categories: high, intermediate and low. Each category contains varying quantities of radioactive materials, varying physical and safety profiles and is consequently managed in different ways. At Sellafield ILW, which is the class of waste to be simulated for treatment during the trial, is put into stainless steel drums, which are then filled with cementitious grouts before being placed into a special aboveground storage facility on the site. The Tetronics trials project will serve to support future waste management planning and inform on potential alternatives to the current baseline techniques and strategies at Sellafield.

Tetronics' plasma waste treatment technology, is anticipated to deliver a considerable level of stabilisation and volume reduction of radioactive waste making it easier to manage during intermediate storage prior to geological disposal. Overall, the combination of volume reduction and end-product stability makes the plasma process particularly attractive for the treatment of all forms of hazardous wastes and, especially, nuclear wastes.

Stephen Davies, CEO for Tetronics explains; "We are pleased to support the nuclear industry with this trial as we believe the Tetronics plasma process can offer multiple benefits over current cementation techniques. Our analysis comparing the lifetime cost savings of using plasma vitrification instead of cementation for unprocessed wet Intermediate Level Waste (ILW) inventory amounts to significant savings for the UK tax payer alone."



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Mike James, Head of Technology for Sellafield said; “Managing the UK’s nuclear liabilities is part-and-parcel of the decommissioning and cleaning up of civil nuclear facilities; including those facilities at Sellafield Ltd. Tetronics has continued to support the qualification of alternative techniques and we therefore see Tetronics’ thermal DC plasma technology as potentially capable of supporting the complexities of integrated decommissioning programmes.”

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Notes for Editors

### **About Tetronics**

Tetronics is a global leader in the supply of waste recovery plants. We have the capability to manage the complete deployment lifecycle of a waste recovery plants from initial testing of the waste material at Tetronics’ test facility, the most comprehensive in Europe, through to the physical onsite installation of a full commercial plant and support. Tetronics uses its patented plasma arc technology to transform waste material including: hazardous waste into environmentally safe building aggregate, precious metal recovery from spent catalysts, energy recovery from waste oil, reducing the volume of radioactive waste and improving the quality and efficiency of steel.

### **How do we do it?**

Tetronics’ patented Direct Current (DC) plasma arc plant technology provides the closest solution to Zero Waste currently available. This sustainable “green” alternative for waste management uses ultra-high temperatures to melt, gasify or vaporise any waste material, in order to treat, recover or generate valuable commercial products. Our technology has been tried and tested over five decades and has been used globally in more than 80 plants across a wide and varied range of applications.



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