

Daily grind foiled at Chapelcross Site

The packets – which use technology designed to keep the coffee aroma locked in – mean nuclear workers can safely seal radioactively contaminated waste into bags so it can be more easily and safely handled.

The idea was brewed by experts at the Culham Centre for Fusion Energy in Oxfordshire, and is now being trialled during work to dismantle Chapelcross' former processing plant that had become contaminated with radioactive tritium as a historical legacy of its operations.

Minister for Nuclear Nadhim Zahawi praised Chapelcross and Culham staff, saying:

I am so impressed by the imagination of staff at Scotland's first nuclear power station: taking inspiration from something as simple as a cup of coffee to help the UK remain at the cutting-edge of decommissioning – an industry which supports highly skilled jobs and regional economic growth.

The JET bag, named after Culham's Joint European Torus experimental fusion reactor, can be made to measure and sealed, preventing the tritium from leaking.

Workers at Scotland's first nuclear power station still have to wear protective suits and breathing equipment when closing-up the bags of contaminated waste, but once sealed they can be handled by workers who no longer need breathing equipment to handle them safely.

Chapelcross' Greg Wotherspoon said:

We saw the team at Culham using the bags and thought it could work for us. You can cut the foil to any size you want and seal them using heat tongs and, just like a coffee bag, you get a really good seal.

Greg's team carried out a series of trials on a variety of contaminated wastes such as: gloves, wet cleaning wipes, rags and solvent. These were sealed and monitored over weeks and months, to test the performance of the bags.

Dave Coombs, Waste Management Group Leader for UKAEA (which owns and runs the Culham Centre), said there was a long-standing relationship with Magnox to share learning, training and good practice.

We took the inspiration from coffee roasters who use foil bags to

keep the beans fresh, but we make the foil bags ourselves now. The team from Chapelcross saw how to cut and make the packages, seal it using the heat tongs and then test it. They 'instantly' saw how it could work for them.

So far the bags have been used for single items at Chapelcross. The next step will be to test the package on a 'blend' of contaminated waste.