

Newsletter

Another three months has passed and it's time for an update on what's happening within the UKQAA and the coal fired power station ash industry.

The Waste Framework Directive

WRAP/BREW/EA Quality Protocol

We have to report that progress on the Quality Protocol for PFA and FBA has been slow since the previous newsletter. The draft Technical Report and Financial Impact Assessment which are the supporting documents for the Quality Protocol were due for publication for public comment on 28 September 2007 and yet these have been delayed. This may be a result of the fact that in August, Blast Furnace Slag was declared by the Environment Agency as being a by-product on the basis of the EU Commission guidance document.



Though not confirmed in writing we understand the revised date will be December 2007.

Environment and Sustainability

Responsibly Sourced Materials Credits

There has been a great deal of discussions in recent weeks about the BRE Life Cycle Analysis (LCA) systems for construction products. The BRE Life Cycle Analysis process starts with an Environmental Profile¹ for a specific product and culminates with the BREEAM and BRE Green Guide publications. The Green Guide then forms the basis for the Code for Sustainable Homes

In order to improve the Green Guide ratings one method is for materials to be supplied as 'Responsibly Sourced', for which extra credits are given. An example of this would be the Forest Stewardship Council for sustainably sourced timber supplied. Compliance with this scheme is given additional credits within the BRE system. It has been proposed the precast and readymixed concrete industries create a similar scheme relating to concrete. As a result the Quarry Products Association and British Precast Concrete Federation are working on

¹ BRE, Methodology for Environmental Profiles for Construction Products, Product Category Rules for Type II environmental product declaration of construction products, 2007. See <http://www.bre.co.uk/page.jsp?id=53>



Thermalite blocks, made with 80% PFA
(click picture for web link)

appropriate schemes for the respective industries. In a similar vein the UKQAA has begun work on such a scheme for the ash producers to work to. However, BRE accept that by-product materials like GGBS and PFA are inherently beneficial and would not, at this stage anyway, require them to be supplied to a RSMC.

Power station ash production

The power stations are required from 1 January 2008 to comply with the Large Combustion Plant Directive (LCPD) and over recent months changes have been made to most power stations to reduce emissions, specifically NOx. The fitting of low NOx burners (BOFA and SOFA) has had some affect on the resulting ash and has required some fine tuning of the boilers. While this has not significantly affected fill and grouting markets, the concrete market had struggled for a period in finding low loss on ignition PFA. However, there are many power stations investing in carbon reduction equipment in order to produce concrete quality ash, e.g. the EN450-1, which will increase capacity over the next 2 years. In addition, many companies have plans for new coal fired power stations using super critical boilers with Selective Catalytic Reduction (SCR) systems. These power stations will produce a very low LOI ash which should be very reactive and ideal for the concrete market.

REACH

Since the last newsletter a vast number of REACH documents have been made available on the various EU web sites. These are guidance documents ranging from pre-registration through to using the IUCLID software, which will be the mainstay of data entry to the REACH system



The European Chemicals Agency has now been set up and detailed explanations of the working of REACH are available. Click on this link for the [ECHA web site](#). In addition there is a [REACH Navigator website](#) which is relatively simple to use and download the various documents. As one would expect it is all rather bureaucratic with many of the documents being long tomes, for example the guidance on identifying a substance is 115 pages long – yet one thought one knew what the word ‘substance’ meant. Even more complex is the IUCLID software.



IUCLID
(International
Uniform Chemical
Information

Database) is a software application to capture, store, maintain and exchange data on intrinsic and hazard properties of chemical substances. It is a key software application essential for the chemical industry to comply with the new legislation, which entered into force on 1 June 2007. The freely downloadable tool will assist chemical companies globally in fulfilling their obligation to submit data to the Agency under the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) legislation from 1 June 2008. The IUCLID 5 software can be downloaded from the [IUCLID web site](#) free of charge. However, you do have to register as a legal entity, e.g. a business, and work out how to get the software to load from the 2044 page manual.

Research

The UKQAA had become involved with a number of new projects in the last three months. These are as follows;

Cambridge University – SMIRT

This project is looking at the techniques for remediating contaminated soils on brownfield sites. One system is Bach Soletanche's Trenchmix system using what



looks like a giant chain saw that is inserted in the ground (see www.bacsol.co.uk for further details). Here the soil is mixed with binders such as Portland cement and PFA, to produce a curtain wall of up to 10m in depth at a single pass.

CIRIA Maritime Concrete Manual

This two year project is to produce a new CIRIA manual on maritime concrete construction. As you are aware PFA concrete is excellent at resisting the ingress of chloride ions that will lead to the corrosion of reinforcing, hence our involvement.

Liverpool John Moores University – Recycling Quarry Dust

This project started back in January 2007 and is looking at ways of using the very fine dust that results from the crushing of rock for aggregates. The idea is to use it in Type I sub-base material. One option is to treat the fine dust to improve its performance in Type I and binder such as lime+PFA and/or Cement+PFA are some of the options being considered, hence the involvement of the UKQAA.

Standardisation

While standardisation committees have been relatively quiet for some months, there are a number of standards that are due for updating in 2010 and work has already begun on these updates.

TC104/SC1/TG5 – k-value concept

This group has met and the initial discussions taken place over the k-value concept. This approach as used within EN206-1 has rarely, if ever, been used in the specification of concrete in the UK. The concept tries to assign a value to fly ash called the k-value representing the cementing efficiency of the material. However, in reality the range of k-values for fly ash in use throughout the EU is frankly bewildering; k-value is one of the most variable constants the UKQAA has ever encountered.

Steag – German Forum

In mid October STEAG PowerMinerals, now known as Evonik PowerMinerals, sponsored and arranged the German British Forum 12th Annual Conference entitled “SOLUTIONS FOR SUSTAINABILITY Striking the Energy and Environmental Balance for 2012”. Within that conference workshop IV, held at the Institute of Civil Engineers building in London, was called ‘From Waste to Resource’. The Technical Director of the UKQAA was asked to chair this 3 hour workshop, which had a number of notable speakers.



Ecobuild 2008

The UKQAA is going to exhibit and present at Ecobuild 2008 which is being held at Earls Court, London on 26-28 February 2008. For further information about Ecobuild visit the web site at www.ecobuild.co.uk.

And finally ...

The work of the UKQAA goes on. If you think there are any aspects of coal fired power station ash products we are neglecting, then please contact us and we will endeavour to encompass them in the future.

**United Kingdom Quality Ash Association,
Regent House, Bath Avenue, Wolverhampton,
WV1 4EG**
Tel: 01902-810-087
Fax: 01902-810-187
Email: Enquiries@UKQAA.org.uk