

Biofertiliser Certification Scheme

Comments on End of Waste Criteria – JRC Proposal of August 2012

Background

The EU Revised Waste Framework Directive has introduced new procedures for defining End of Waste (EoW) for biowaste, which apply equally to all EU countries. Within the Framework, biowaste including digestate from AD and compost, must achieve EoW status to qualify as re-cycling.

The UK is the only EU member state to have developed it's own end of waste criteria which, for digestate, is administered by the Biofertiliser Certification Scheme (BCS) run by the REA. Although the adoption of the new EoW proposals would disproportionately affect the UK compared with other states who have no such criteria, the UK would not resist sensible changes that are attainable in the UK market.

However, it is clear that the introduction of mixed waste inputs would be unacceptable and that other significant sections of the new criteria would not be suitable for conditions in the UK. These are discussed in detail below.

UK Digestate Market & the Source Separation Principle

The Anaerobic Digestion Quality Protocol, which defines the end of waste for digestate, was first published in September 2009. The process towards this goal started in 2006 with the publication of a Digestate Standard for Scotland; this was followed by a programme of work by a technical advisory group and a comprehensive risk assessment by Cranfield University. At the time, there were very few biogas plants in the UK and there was therefore a unique opportunity to create market confidence in quality digestate with farmers, farm assurance schemes and retailers; the Cranfield study concluded that this could only be achieved in a cost effective way by eliminating potential pollutants in feedstocks and so the principle of rigorous and verifiable source separation of inputs was adopted. The culture of source separation is now firmly embedded in collections methods, the design of biogas plants and in the expectations of all users and stakeholders in the market for digestate.

The unexpected inclusion of inputs from MBT, Sewage Sludge and MSW, in the JRC report would therefore effectively destroy the digestate market in the UK, and negate investment already made in plant equipment and collection methods. Furthermore the past and ongoing programme of digestate trials, development and research funded by WRAP, with the objective of further developing the confidence of the market, would be entirely negated. The introduction of a testing regime that could identify the organic pollutants that might be present in mixed wastes would be prohibitively expensive.

Since, within the Waste Framework, biowaste must achieve EoW status to qualify as re-cycling, the impact of unexpected changes on existing and future waste feedstock contracts in the UK cannot be exaggerated. For instance many waste contracts now in force and currently under tender rely on the achievement of Local Waste Authority re-cycling targets; without a

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market for the digestate these would be impossible to achieve via AD treatment.

Testing

As a result of the decision to allow mixed wastes a vast range of lab tests for organic pollutants such as PCBs, PAHs, PCDDs and PFCs are specified for all plants in first year. In subsequent years if the plants prove that none of the organic pollutants are present, they can reduce to one test p.a. If not, there needs to be between 2 and 12 sets of tests according to volumes of inputs. AfOR is currently investigating what the lab costs are likely to be, but they are likely to be prohibitively expensive, especially for smaller plants.

Stability

Stability testing (RBP equivalent) not now needed, but there are definitions of acceptable times/temperatures which are for the purpose of defining "minimum treatment conditions which are known to result in quality suitable for EoW"

Treatment processes & Techniques (hygienisation)

Time temperature profiles are suggested for non-ABP plant. For thermophilic there is a choice between minimum retention of 20 days or if <20 days - pasteurisation. Mesophilic requires pasteurization or a post-composting phase which we consider unworkable given the requirement to dispose of the resulting liquor. There is also no differentiation between the 3 possible products, whole, fibre & liquor. Member states can authorize other time/temperature profiles which are provide "equivalent hygienisation" - the definition of this is not give. UK could suggest alternative profiles/tests which a. ensure that plant pathogens are dealt with b. that treatment is complete c. there is no potential damage to land or crops from the application of digestate

Weed Seed Requirement

New weed seed test requirement – 2 seeds per litre. The test takes 28 days (expensive) and is unnecessary in AD because there is very little chance of seeds surviving the process

Sampling & Testing

Sampling to be done by independent sample taker, every time a sample is tested for EU EoW purposes. This will add to the costs that producers incur, making EoW system further out of reach for small scale producers. We agree with the (AfOR) idea of 'random selection of some processes for independent sampling'.

Testing to be done by independent accredited laboratories – assumes that all the proposed methods of test are actually accreditable; some might not be. Accreditation adds costs, which will be passed on to producers via labs' sample testing charges.

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PTEs

Copper and Lead limits have been tightened – Lead 200 Mg/Kg to 120 and Copper 200 to 100 compared with PAS110. It is understood that a substantial proportion of UK plants would not be able to comply with the new limits. Unlike the current PAS it is not possible to use a “moving average” which takes account of variations in concentrations of PTEs. A disadvantage of the JRC proposal is that it does not take into account the dilution of whole digestate compared to compost. Other PAS110 PTE limits are also being failed by some plants. Rigid PTE limits at the levels suggested will pose considerable problems for the UK.

Existing Certification Schemes

Existing UK Certification schemes can continue to operate – as long as our schemes re-align to EU EoW criteria and our schemes/contracted certification bodies obtain suitable accreditation. Careful thought is required as to how this would work and there could be several alternatives.

REACH (chemicals) legislation

REACH may well still affect digestate even when it has achieved EoW – we must work for that to be changed, as has been achieved for EoW compost.

Labelling

Very stringent product labelling is proposed which will identify the inputs - i.e. Source Separated, MSW, Sewage sludge, MBT, agricultural, ABPs plus the nutrient content. This seems to be linked with the introduction of mixed wastes and such detail would not be required if these potentially polluting inputs were eliminated.

Markets

The type of market usage is not identified but there is requirement to provide recommendations for use of each consignment and how to apply it. There is perhaps scope here (outside the EoW proposal) for market sector specifications, for source separated inputs.

Inputs

Positive list of allowable inputs provided – like the current ADQP but with wider scope (I have not analysed this in detail yet)

Time to achieve Initial Certification

It could take 20 months to achieve initial certification, because;

- sample analysis is required once per quarter over the first year
- having to produce batches in accordance with EU EoW criteria to sample and test
- having to undergo independent inspection after compliance evidence has been compiled

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- addressing any non-compliances before becoming certified,