Our ref: PAS100 review - stability
Your ref:

02 December 2014

Dear Kiara,

PAS 100 review, compost stability and End of Waste.

Thank you for your letter dated 25 July 2014, sorry this has taken much longer to respond to than we would like.

The following is general comment on the link between PAS 100 and End of Waste as well as specific response to the questions raised in your letter.

General:

The QP and PAS were developed without the use of a relevant non-waste comparator. Limits and requirements were incorporated to protect the environment and reduce risk where there were uncertainties e.g. through specifying inputs, metals limits, stability threshold.

Much of the PAS 100 document is about maintaining and controlling quality and as such is not End of Waste criteria in the strictest sense. However they help provide a level of detail and reassurance that the compost will reach the required quality, in addition to any specific testing. We would therefore like to see that the various aspects of PAS 100 relating to the management of the process retained through the review. These areas of PAS provide a frame work through which a waste treatment process can deliver a product meeting end of waste criteria.

Comparator:

Our current approach to End of Waste relies heavily on the substitution principle i.e. that a waste derived material is replacing something else and that its environmental performance should be no worse than the material being replaced. Therefore where industry would like to change specific aspects of PAS 100 this should be clearly justified and linked to a specific relevant comparator material. Should you wish to make such a comparison it is vital that we all agree what the relevant comparator should be well in advance and discuss precisely the approach to take. I am not aware that anyone has identified an appropriate comparator.

Stability:

The inclusion of a stability threshold is important in terms of demonstrating that end of waste for compost has been achieved and for safe guarding the environment and Human Health.

We will require the inclusion of a stability threshold and can see no viable alternative to it.

Composting of waste is a waste treatment process and so an effective measure of when this has been completed is required. In this case the process of waste treatment is one of microbial activity and so the measurement of microbial activity can be regarded, in part, as a measure of successful treatment of the waste. In order for End of Waste to be achieved the waste treatment process must have been concluded. This is why the measurement of stability is important in terms of demonstrating that waste treatment has been concluded.

Plant response tests are good indicators that the material is fit for purpose, but it is not necessarily the best or only indicator that the material has been fully recovered. Waste material that is still in the active treatment phase may well generate an acceptable plant response but that doesn't mean it has ceased being waste or that waste treatment has been concluded. Therefore the plant response test cannot be viewed as an alternative to the stability threshold.

Metals:

The inclusion of metal limits is important in terms of safe guarding the environment and Human Health.

Currently, without relevant comparison or significant risk assessment/justification, we do not think the limits should be revised up. Additionally where the limit is much higher than currently experienced within compliant compost, on the basis of existing sample data, we would like to see the limit tightened. The reason for this is that PAS 100 is often used in other areas of End of Waste not relating to compost, yet the limit within PAS is not necessarily reflective of compost. The PAS metal thresholds could be lower without significantly impacting on existing compliance.

Restricted waste inputs:

The inclusion of restricted waste inputs is important for safe guarding the environment and Human Health through risk management.

If waste inputs are broadened the impact on existing compost quality will need to be understood.

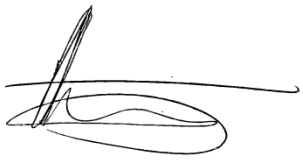
Odour:

We appreciate that the link between odour and stability is complex and influenced, in part, by feed stocks. Operationally the EA face many odour complaints from composting sites. Odour is, in part, generated by microbial activity and so having a stability threshold is helpful in terms of reducing or curbing potential odour issues. Any removal or relaxation of stability threshold is likely, in our opinion, to lead to a rise in odour issues.

To conclude we currently feel that there are no realistic alternative to the stability test. The stability test is part and parcel of a range of indictors that help define when end of waste has been achieved and protect the environment and human health. Additionally none of these indicators can be relied upon solely to demonstrate end of waste. The metal limits should also stay the same except where a good evidence base suggests they can be tightened without impacting compliance.

The industry may want to consider whether they wish to consider developing a new PAS specification for an alternative material such as a bio stabilized food and green waste. An additional PAS could help support the spreading of the material as a waste, though this material may be unsuitable for consideration as having achieved end of waste and wouldn't be regarded as a compost.

Kindest regards



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Definition of Waste

Environment and Business Directorate