



Environmental Protection UK
44 Grand Parade
Brighton
BN2 9QA

22nd January 2010

Emailed to: paul.bretherton@environment-agency.gov.uk

Consultation on the use on land of compost-like outputs from mechanical-biological treatment of mixed municipal solid wastes: A Response from Environmental Protection UK

We are writing in response to your consultation on the use on land of compost-like outputs from mechanical-biological treatment of missed municipal solid wastes. Environmental Protection UK has considered the consultation documents and welcomes the opportunity to comment on the proposals.

1. About Environmental Protection UK

Environmental Protection UK brings together organisations from across the public, private and voluntary sectors to promote a balanced and innovative approach to understanding and solving environmental problems, through policy development and education. We are a registered charity with 110 years experience of environmental campaigning, public information provision, producing educational resources and policy formulation. Within land quality our goal is to promote policies and practices that encourage the use and reuse of land in a way that protects human health and the environment.

Environmental Protection UK's Land Quality Policy Committee has been involved in the development of this response. This Committee brings together policy makers, regulators and practitioners from local authorities, consultants, developers, academics, industry, interested NGOs, as well as members from Environmental Protection UK's regional divisions. As such it is able to draw on a wide range of expertise and views from representatives of the entire land quality community.

2. Answers to Consultation Questions

1. Does the guidance explain clearly how we regulate the recovery of land of compost-like outputs from the mechanical-biological treatment of mixed solid wastes? (We refer to these outputs as MBT CLO). If not, what aspect(s) you consider not to be clear and why.

We consider the guidance to be clearly written. However, we do not understand what would happen should sampling reveal exceedance of the SLVs. The trial would cease but would the operator be required to return the soils to below the SLV, to baseline or just leave it exceeding the SLV? We would be grateful if the Environment Agency could clarify this.

2. Is the guidance clear about the additional information that operators will need to provide if they wish to carry out a trial? If not, please state what aspect (s) you consider not to be clear and why

No comment

3. Are the technical standards and measure suited to carrying out large-scale trials in England and Wales? If not, please explain why

No comment

4. In Schedule 1 of the guidance we list the determinands (the key characteristics, including potential contaminants) to be measured in the CLO, the soil and the crops. Is this list sufficient? If not, please identify any missing determinands that you consider should be included and why.

No the list is not sufficient. There are many other contaminants which may pose a risk to human health through uptake in the food chain which may be present in the CLO. Potential contaminants such as arsenic, asbestos, beryllium, vanadium and organic hydrocarbon contamination (hydrocarbon fractions) should also be considered.

In addition, there is no correlation between the potential contaminants listed in the Table S1.1, Table S1.2 and Table S1.3. Therefore it will not be possible to determine whether contamination noted in the crops or soil can be attributed to the CLO, or whether other factors are influencing the concentrations.

5. Are the test methods that we specify for the determinands appropriate? If not, please identify the method(s) that you do not consider appropriate and why.

No comment

6. Are the limits we specify for the levels of determinands in the CLO appropriate? If not, please identify the limit(s) that you do not consider appropriate and why.

It is difficult to assess whether the values are appropriate without detailed information on the matrix properties of the CLO and how this is likely to differ from that of sludge. The matrix properties significantly affect the mobility of contaminants and hence the level at which limits should be set. The Sludge Directive is a dated piece of guidance and does not incorporate many of the scientific advancements in the understanding of the toxicological affect of contaminants.

We are concerned about the upper limits on CLO composition as given in Table S1.1 of Appendix 1. These levels are considered high, in particularly 300mg/kg of Mercury.

7. Have we set appropriate Soil Limit Values for the levels of determinands in the soil? If not, please identify the limit(s) that you do not consider appropriate and why.

The soil limit values proposed for many of the PAH compounds are very low and many are below those described in the UK Soil and Herbage Survey for rural soils. The value for benzo(a)pyrene is based on ecological values proposed within the Environment Agency 2008 Ecological Risk Assessment report. This value is very low and therefore benzo(a)pyrene may exceed at the majority of sites even prior to application of the CLO.

The organic contaminant values proposed do not appear to place an emphasis on soil organic matter content or pH. The amount of soil organic matter content and pH of the soil is extremely important when determining the mobility of contaminants and therefore should be considered within the Soil Limit Values in order to determine their appropriate application.

The Sludge Directive values for the metal contaminants are also not considered appropriate. The Sludge Directive is a dated piece of guidance and does not incorporate many of the scientific advancements in the understanding of the toxicological affect of contaminants. In addition the values within the Sludge Directive are designed for dealing with material with a sludge matrix rather than a soil matrix. The difference in the matrix properties of sludge and soil can also significantly affect the mobility and uptake of contaminants.

There also appears to be little consideration of the leachability of contaminants in the soil. This would be an important consideration when trying to determine whether contaminants from CLO spread on the land are likely to be readily mobilised and affect a significant depth of soil or contaminate nearby surface waters.

8. In Appendix 2 we present the alternative limit values for metals in soils when wastes are applied to land. We refer to these limits as ‘soil screening values’ or SSVs. We present the derivation of these limits and some key arguments for and against their use. We also discuss the uncertainties with these SSVs and the statutory limits for sewage sludge.

What are your views on the SSVs and their technical basis?

The SSVs present a more technically and scientifically robust methodology of deriving values than the Sewage Sludge values. However, the emphasis is ecological protection rather than protection of transmission of contaminants through the food chain or within controlled waters.

Would they provide better protection of soil?

Most likely yes, however many may prove unachievable in a real world environment.

What practical problems would there be around their potential use for MBT CLO?

It may not be possible to achieve the levels that are specified by the SSVs and therefore the benefits of using MBT CLO may not be realised. In addition a limited number of contaminants are considered and many more may be present that are not tested for.

We would welcome references to other published and scientific or technical evidence supporting or challenging these SSVs.

No comment

9. Does the guidance clearly set out the scientific data and information that must be report to us? If not, please explain why.

No comment

10. The guidance only applies to the outputs from treatment processes that include a biological treatment stage- aerobic composting or anaerobic digestion. Should our approach be extended to cover outputs from processes that do not involve biological treatment, such as mechanical-heat treatment (MHT) of mixed municipal solid wastes through autoclaving? Please give reasons.

No comment

11. In Appendix 3 we estimate the additional costs of collecting and analysing the prescribed samples for a typical trial and how these may impact on the cost per tonne of CLO and on the cost per tonne of a typical crop. We have used reasonable but conservative assumptions on rates of CLO application and crop yield. Do you consider these to be reasonable and realistic estimates? If not, please explain why.

No comment

12. Any other comments?

No comment

3. Contact Us

If you require any further information on the views expressed in this response please contact:

Lisa Crews, Policy Officer

Phone - 01273 878782

Email – lisa.crews@environmental-protection.org.uk