position statement

Environment Agency

Anaerobic digestion of agricultural manure and slurry

Background

Anaerobic Digestion (AD) is a process which harnesses natural bacteria to treat biodegradable materials such as agricultural manure and slurry, food waste and sewage sludge. The AD process produces a methane rich biogas which can be captured and used to generate electricity and heat and the digestate residue can be beneficially applied to farmland as fertiliser or as a soil conditioner. We support the use of AD as a means of diverting biodegradable wastes from landfill, recovering value from them and reducing greenhouse gas emissions.

This note updates and replaces our briefing note issued in December 2008, following changes introduced by the Environmental Permitting (England & Wales) Regulations 2010. It sets out how we will apply waste regulatory controls to the AD of agricultural manure and slurry and the use of the resulting digestate as a fertiliser on agricultural land in England and Wales.

Our position

Agricultural manure and slurry is not considered waste when it is used directly as a fertiliser on land. When agricultural manure or slurry is destined for a treatment process for example composting or AD, it is waste and will be subject to regulatory control.

Digestate

When the feedstock to an AD plant is waste the resulting digestate and biogas are waste until put to their final use. We have taken a different approach for agricultural manure and slurry because we recognise that the digestate produced from manure and slurry has improved fertilising properties and will have less of an environmental impact than undigested manure and slurry.

We do not consider the AD digestate output to be waste if:

- the only waste feedstock to an AD plant is agricultural manure and slurry and it is spread as a fertiliser on agricultural land
- agricultural manure and slurry is mixed with a non-waste feedstock e.g. crops grown specifically for AD and it is spread as a fertiliser on agricultural land.

If the manure and slurry feedstock is mixed with other waste feedstocks, then the resultant digestate will be waste and subject to environmental permitting controls.

The joint Environment Agency/WRAP[1] Waste Protocols Project has developed a Quality Protocol for anaerobic digestate. This defines the point at which waste may become a non-waste material and can used without the need for any waste regulation controls. Digestate produced from waste feedstock in accordance with the protocol can be spread to land as a fertiliser without the need for either an environmental permit or waste exemption. Further information about the protocol can be found on the our website.

Biogas

The biogas produced from the anaerobic digestion of manure and slurry is a waste and is subject to environmental permitting controls.

Biomethane produced from the AD of waste which is used as transport fuel or injected into the gas network is currently under consideration by the Waste Protocols Project. We have produced a regulatory position statement for the regulation of materials being considered for development of an end of waste protocol.

Further information on Environmental permits and exemptions for AD plants

We have produced the following guidance Anaerobic digestion and environmental permitting explaining the environmental permits and waste exemptions which relate to AD plants.

Position Statement 029
Version 1.0
October 2010

[1] Waste & Resources Action Programme