



Landfill Directive – Defra/ Environment Agency approach to the use of higher Waste Acceptance Criteria (WAC) limits for hazardous waste.

This note summarises the current and longer-term regulatory issues arising from application of the higher limits to hazardous wastes sent to landfill as allowed by the EU Council Decision annex (EC/33/2003), section 2. For the purposes of this note, the term 'higher WAC' (waste acceptance criteria) refers to; the derogation for using up to three times WAC leaching limits and to the use of higher limits for total organic carbon content. This statement has been agreed between Defra and the Environment Agency and is supported by an Environment Agency briefing note, which is available from our website. The latter document provides advice on how to put forward a case for use of the derogations.

Current issues

What underlying philosophy should be applied to the use of higher WAC limits?

The overall objective of the Landfill Directive is to reduce the environmental impact from the landfilling of wastes and reduce our reliance on this waste management option. The acceptance of wastes above WAC limits must be limited to specific parameters of specified wastes at specific landfill sites. The use of higher WAC must be seen as the exception rather than the rule and only used where it can be shown that there is no alternative to landfill for the waste in question.

What is a 'specified waste' for the purposes of allowing the use of higher WAC leaching limits?

Higher WAC leaching limits will only be allowed in respect of 'specified wastes'. A 'specified waste' is one that can be assigned a specific List of Waste (LoW) code¹. In practice a single LoW code may cover several different waste types with varying potential for recovery, treatment or disposal. A specified waste should therefore, be a clearly identifiable waste type arising from a specific process, albeit one that may arise at a number of separate locations.

Approach for 3 x WAC

The Environment Agency (competent authority) may only allow an increase in leaching limit value where² ;

- *the competent authority gives a permit for specified wastes on a case-by-case basis for the recipient landfill, taking into account the characteristics of the landfill and its surroundings, and*

¹ The List of Waste (England or Wales) Regulations 2005

² Council Decision annex, section 2, opening paragraphs.

- *emissions (including leachate) from the landfill, taking into account the limits for those specific parameters in this section, will present no additional risk to the environment according to a risk assessment.*

The first part requires the Environment Agency to authorise the specific waste through the landfill permit. The second part requires evidence through risk assessment that there will be no unacceptable emissions from a site if it were to receive waste with an increased WAC leaching limit.

The Environment Agency will require evidence, supported by waste testing that for the 'specified waste', an increase in the WAC leaching limit is necessary.

Where there is a need for an increase, permits will limit these to specific parameters. For example; a permit may allow a landfill to accept Air Pollution Control (APC) residues. Waste characterisation of the APC residue may identify the parameters above WAC leaching limits as chlorides, lead and cadmium. The risk assessment may indicate that it is acceptable only to increase some of the parameters. The permit will only allow an increase in WAC leaching limits for those substances that will not result in an unacceptable emission for this 'specified waste', for example the lead and cadmium.

The landfill operator must justify, for a 'specified waste', what parameters need to be increased and confirm that the increase is acceptable through risk assessment. Where the Environment Agency approves the assessment and agrees the need, it will include conditions in the permit. The permit will also include a requirement for the operator to submit an annual report for each waste benefiting from the higher WAC leaching limit provision to confirm that there remain no alternative waste management options available.

Use of modelling surrogates

The use of surrogates to model the impact of other similar parameters within a hydrogeological risk assessment is standard practice in the UK. Extending this practice to model surrogates within the context of higher WAC leaching limit values is appropriate where a justification for the use of these surrogates has been provided.

Derogation for organic carbon content

A derogation can be allowed in respect of the Total Organic Carbon (TOC) content of a waste provided that the waste can be shown to be within the limit for Dissolved Organic Carbon (DOC)³. The derogation for organic carbon content will be allowed where the waste producer can demonstrate that it is not possible or practicable either to separate out the component of the waste stream causing elevated organic carbon content or to treat the waste to reduce its organic carbon content below the limit.

Use of underground storage for hazardous waste

Sites for permanent underground storage are not subject to the generic hazardous WAC – they rely instead on specific acceptance criteria designed to suit the circumstances of the site but within the overall spirit of the Landfill Directive

³ See the Council Decision annex, sections; 2.1.2.2, 2.3.2 and 2.4.2, footnotes to tables.

Longer term issues about the use of higher WAC

Can we rely on higher WAC forever?

- We see three times WAC for inorganic substances as the Directive's way of allowing Member States some flexibility to deal with particular problem wastes. It should not be seen as an opportunity to raise WAC by a factor of three for ever.
- In line with the overall aim of the directive to reduce our reliance on landfill we expect waste to meet the TOC limits set out in the Council Decision annex.

We propose to limit the use of higher WAC for inorganic substances by requiring the landfill operator or waste producer to undertake an annual review of alternative options for managing the waste. This will require the original justification for the derogation to be re-visited. These reviews, together with information provided in support of any future applications for permit variations, will allow the Environment Agency to maintain an overview of whether the use of higher WAC continue to be appropriate for a particular waste.

Many of the wastes that will be received under a higher WAC derogation arise from industrial processes regulated under the Environmental Permitting regime. We expect that this regime will increasingly impact on the waste outputs from those processes such that the waste is capable of recovery or, if landfilled, will meet WAC leaching limits.

Thus, it is anticipated that the number of waste streams requiring a higher WAC derogation (up to 3 times the limit) should reduce in time. This situation will be monitored. Compliance with WAC has also been raised in the context of the Waste Strategy Review.

Problematic waste streams

Landfill operators may apply to increase inorganic leaching limits (up to 3 times the limit) in their permits as described above. However, there may be inorganic wastes that cannot meet even the 3x leaching limit allowed by the Council Decision. The Environment Agency will continue to use its published approach to handling such wastes as problematic waste streams. Waste streams that cannot meet the TOC limit will also be dealt with as problematic wastes.

Reporting on three times WAC

The UK is obliged to record the number of three times WAC derogations issued per annum and to report these to the Commission's every three years under the Landfill Directive, article 15. The Environment Agency will report annually to Defra on the grant of three times WAC permits or variations.

Defra / Environment Agency
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