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STATUTORY INSTRUMENTS

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**2005 No. 1640**

**The Landfill (England and Wales)  
(Amendment) Regulations 2005**

**Amendment of the Landfill (England and Wales) (Amendment) Regulations 2004**

**13.** For paragraph 14 (criteria for granular waste accepted in stable non-reactive hazardous cells) of the schedule substituted by the Schedule substitute—

**“Criteria for stable non-reactive hazardous waste and non-hazardous waste deposited in the same cell with such waste**

**14.** Stable, non-reactive hazardous waste and non-hazardous waste which is to be landfilled in the same cell with such waste shall only be accepted if—

- (a) in the case of granular waste—
  - (i) it meets the limit values for leaching set out in Table 4;
  - (ii) it meets the additional criteria set out in Table 5; and
  - (iii) it will have either—
    - (aa) if it is cohesive waste, a mean in situ shear strength of at least 50kPa; or
    - (bb) if it is non-cohesive waste, an in situ bearing ratio of at least 5%;
- (b) in the case of monolithic waste—
  - (i) it meets either—
    - (aa) the limit values for leaching set out in Table 4; or
    - (bb) the limit values for leaching set out in Table 5A;
  - (ii) it meets the additional criteria set out in Table 5B;
  - (iii) it has a mean unconfined compressive strength of at least 1MPa after 28 days curing;
  - (iv) it has either—
    - (aa) dimensions of greater than 40cm along each side; or
    - (bb) a depth and fracture spacing when hardened of greater than 40cm; and
  - (v) where the waste was subjected to treatment to render it monolithic, prior to such treatment it met the following limit values—
    - (aa) Loss on Ignition of 10%; or
    - (bb) Total Organic Carbon of 6%.

**Table 4**

<i>Component</i>	<i>Symbol</i>	<i>L/S = 10 l/kg<sup>(a)</sup> mg/kg dry substance</i>
Arsenic	As	2
Barium	Ba	100
Cadmium	Cd	1
Total Chromium	Cr <sub>total</sub>	10
Copper	Cu	50
Mercury	Hg	0.2
Molybdenum	Mo	10
Nickel	Ni	10
Lead	Pb	10
Antimony	Sb	0.7
Selenium	Se	0.5
Zinc	Zn	50
Chloride	Cl <sup>-</sup>	15,000
Fluoride	F <sup>-</sup>	150
Sulphate	SO <sub>4</sub> <sup>2-</sup>	20,000
Dissolved Organic Carbon	DOC	800 <sup>(b)</sup>
Total Dissolved Solids	TDS	60,000 <sup>(c)</sup>

(a) These values must be determined using EN 12457/1 to 3 (applied, in the case of monolithic waste, to a sample which has been crushed).

(b) If the waste does not meet this value for Dissolved Organic Carbon (DOC) at its own pH, it may alternatively be tested at L/S = 10 l/kg and a pH of between 7.5 and 8.0. The waste shall be considered as complying with the acceptance criterion for DOC if the result of this determination does not exceed 800 mg/kg.

(c) The value for Total Dissolved Solids can be used alternatively to the values for Sulphate and Chloride.

**Table 5**

<i>Parameter</i>	<i>Value</i>
Total Organic Carbon (TOC)	5% <sup>(a)</sup>
pH	Minimum 6
Acid Neutralisation Capacity (ANC)	Must be evaluated

(a) If this value is not achieved, a higher limit value may be permitted by the Environment Agency, provided that the Dissolved Organic Carbon value of 800 mg/kg is achieved at L/S=10l/kg, either at the material's own pH or at a pH value between 7.5 and 8.0.

**Table 5A**

<i>Component</i>	<i>Symbol</i>	<i>mg/m<sup>2(a)</sup></i>
Arsenic	As	1.3
Barium	Ba	45
Cadmium	Cd	0.2
Total Chromium	Cr <sub>total</sub>	5
Copper	Cu	45
Mercury	Hg	0.1
Molybdenum	Mo	7
Nickel	Ni	6
Lead	Pb	6
Antimony	Sb	0.3
Selenium	Se	0.4
Zinc	Zn	30
Chloride	Cl <sup>-</sup>	10,000
Fluoride	F <sup>-</sup>	60
Sulphate	SO <sub>4</sub> <sup>2-</sup>	10,000
Dissolved Organic Carbon	DOC	Must be evaluated

(a) These values must be determined using EA NEN 7375:2004. Where it is appropriate for compliance testing, the Environment Agency may specify use of a shortened version of the 64-day tank test provided for in EA NEN 7375:2004 comprising only the first four steps, and in such cases, the limit values shall be a quarter of the values in the table.

**Table 5B**

<i>Parameter</i>	<i>Value</i>
pH of the eluate from the monolith or crushed monolith	Must be evaluated
Electrical conductivity (µS.cm-1m-2) of the eluate from the monolith or crushed monolith	Must be evaluated
Acid Neutralisation Capacity (ANC) of the crushed monolith	Must be evaluated.”