

www.deponieonline.de
www.landfillonline.de

Berlin, den 2000-05-09

Nicht nur Viren fliegen im Internet herum, sondern auch Nützlicheres.

Z. B. Informationen aus dem Komitee, das für die Erarbeitung des Anhangs II der EU Deponierichtlinie zuständig ist.

Nachstehend finden Sie:

- Entwurf für "das Annahmeverfahren für Abfälle auf Deponien"
(Waste Acceptance Procedure) vom 10. April 2000 für die Sitzung am 2. Mai 2000
- Entwurf für "Abfallannahmekriterien für Deponien für Inerte Abfälle "
(List of Waste Acceptable at Landfills for Inert Waste) vom 11. April 2000 für die Sitzung am 2. Mai 2000

Wenn Sie an den authentischen Dokumenten interessiert sind, wenden Sie sich bitte an die Zuständigen in Ihrem Landesumweltministerium oder um Bundesumweltministerium. Dort kennt man sicherlich auch den jeweils aktuellen Stand der Diskussion.

Brussels, 10 April 2000
ENV-E.3/AK/ak D(0)

**COMMITTEE FOR THE ADAPTATION TO SCIENTIFIC AND TECHNICAL PROGRESS
OF EC-LEGISLATION ON WASTE**

**Council Directive 1999/31/EC on the Landfill of Waste
Meeting on 2 May 2000**

Working Document of the Commission Services

Point 4 : Waste Acceptance Procedure

I. Steps for the determination of acceptability of waste

The following Steps are suggested:

- 1) To determine if a waste may be landfilled the following must be checked : -
 - a) May the waste be landfilled pursuant to Article 5 (3) ?
 - b) Has the waste been pre-treated pursuant to Article 6 a ?

- 2) To determine if the waste can be accepted at a specific landfill class the following must be checked :
 - a) Is the waste type included in a list of wastes acceptable at a specific landfill class ? If not, it must be tested.
 - b) If it is on a list, are there any indications that the waste does not fulfil the criteria for the landfill class ? (eg Inert waste with contaminations) If yes, it must be tested.

2. Testing

Annex II lays down a three-level hierarchy for the general characterisation and testing of the waste.

2.1. Level 1: Basic characterization

The basic characterisation constitutes a thorough determination of the short and long-term leaching behaviour and/or characteristic properties of the waste.

According to Annex II a particular waste type must normally be characterised at Level 1 and pass the appropriate criteria in order to be accepted on a reference list.

At Level 1 key variables and behaviour of a waste must be identified which will be relevant for Level 2 testing.

To gain a good knowledge of the waste and its behaviour in the landfill it is necessary to carry out tests for the determination of the short-term leaching behaviour, the long-term leaching behaviour and/or the characteristic properties of the waste. A short term leaching test should in any case be

done. In addition a long-term leaching test or a composition test should be done.

Waste types that regularly arise with the same composition and where the origin is known, could be tested at level 1 for the first delivery and for further deliveries testing requirements may be reduced to determine whether the waste is still the same.

Limit values should be set for the basic characterisation to determine whether a waste is acceptable at a landfill class. The parameters could be those listed in the Working Document of the Commission Services for Point 5 of the agenda (see 5.2. criteria for the acceptance of waste). The limit values proposed by Germany and Austria are related to a short term leaching test and a composition test. No limit values or other criteria have been proposed for the long-term leaching.

Standardized test methods will have to be determined. CEN is currently working on such tests. The following tests in preparation by CEN have been proposed :

Leaching tests:

- WI 16 Percolation Simulation test
- WI 15 Leaching behaviour test - influence of pH under steady conditions
- ENV 12920 determination of leaching behaviour under specified conditions
- WM Chemical analysis of eluates

Composition tests:

- WI 13 Digestion for subsequent determination of aqua regia soluble portion of elements in waste
- WI 12 Microwave assisted digestion with hydrofluoric, nitric and hydrochloric acid mixture for subsequent determination of elements in waste.

In addition to testing, it might be useful to collect more information on the waste, such as the source, and to determine criteria that are not related to tests.

2.2. Level 2: Compliance test

Compliance testing constitutes periodical testing by simpler test methods to determine whether a waste complies with the permit conditions and /or specific reference criteria. The tests focus on the key variables identified by basic characterization.

Testing at this level could be limited to fewer tests than needed for Level 1 testing, tests with a different character or tests on fewer components. One possibility would be to use a simple leaching test and analyse those parameters that have been identified as key variables and behaviour in the basic characterisation.

The following tests in preparation by CEN have been proposed :

Leaching tests:

- WI 21 Compliance test for leaching, l/s ratio 2 l/kg, particle size < 4 mm
- WI 22 Compliance test for leaching, l/s ration 10 l/kg, particle size < 4 mm
- WI 23 Compliance test for leaching, 2 stage batch test, l/s ration 2 l/kg and 8 l/kg, particle size < 4 mm
- WI 24 Compliance test for leaching, l/s ration 10 l/kg, particle size < 10 mm
- WI 10 Compliance test for leaching of monolithic waste

- WI 4 Chemical analysis of eluates

2.3- Level 3: On-site verification

This constitutes a rapid check to confirm that a waste is the same as that which has been subjected to compliance testing and that which is described in the accompanying documents. Each load of waste arriving at the landfill must be subjected to Level 3 verification.

It may merely consist of a visual inspection of a load of waste before and after unloading at the landfill site. There is also the Option of performing rapid tests at the gate of the landfill.

Administrative checking of the required documents is also part of this verification.

There are no Standards in preparation by CEN for Level 3 testing. It should be discussed whether standardized test methods are necessary for this level.

3. General questions

Which tests should be required for the basic characterization ?

Where should limit values be set ? (at which level ? for which criteria ?)

Apart from limit values, what other criteria should be set and how should these be assessed ?

How can key variables and behaviour be determined ?

How can the results of compliance tests be compared to the results or requirements according to the basic characterisation ?

Brüssels, 11 April 2000
ENV.E.3/AK/ak D(0)

COMMITTEE FOR THE ADAPTATION TO SCIENTIFIC AND TECHNICAL PROGRESS OF EC-
LEGISLATION ON WASTE

Council Directive 1999/31/EC on the Landfill of Waste

Meeting on 2 May 2000

Working Document of the Commission Services

Point 5: Waste Acceptance Criteria for Landfills for Inert Waste

1 List of Waste Acceptable at Landfills for Inert Waste

1.1 Requirements for the list

A list shall be drawn up containing the wastes that are acceptable at landfills for inert waste without prior testing. Wastes that are not on the list can be accepted at landfills for inert waste, but must be tested first and pass the limit values. This approach was chosen as it does not seem useful to draw up a non-exhaustive list of wastes that can be accepted at landfills for inert waste subject to testing.

The wastes on the list are assumed to fulfil the criteria as set out in the definition of inert waste in Article 2d.

The waste should contain no other material such as metals, plastics, chemicals, etc. If there is a doubt about the lack of contamination of the waste, testing should be applied.

Comments on the nature of the list have been received from the United Kingdom and Austria.

The United Kingdom has submitted a short list of wastes acceptable at landfills for inert waste without testing and does not consider it useful to draw up a list of wastes that need testing. The United Kingdom suggests that, in view of the lower degree of environmental protection afforded at landfills for inert waste, the waste listed should be a single stream, single source material, where there is no doubt about the lack of contamination. Otherwise testing should be applied.

Austria is of the opinion that the list and the testing requirements should be minimum requirements and that Member States should have the possibility to set more stringent requirements.

1.2 Waste types

Annex 1 lists the wastes that seem to be clearly inert. It should be discussed if further specifications of the entries are necessary.

Annex 2 contains the wastes proposed for the list that could for the moment not be included.

In some cases it is not clear if these wastes are inert. To be able to assess this, more information is needed on why they are considered inert. These cases are indicated in the table in Annex 2.

Other wastes were not included because they do not seem to be inert. These cases are indicated in the table in Annex 2.

Asbestos cement has not been included in the list. It seems doubtful whether asbestos cement fulfils the criteria that can be derived from the definition of inert waste in Article 2 e of the Directive. The following considerations should be taken into account:

- One of the criteria of the definition is that the pollutant content is insignificant. Asbestos cement contains 40 % of asbestos, a substance classified as carcinogenic.
- Inert waste may not react physically in a way likely to give rise to environmental pollution or harm human health. Asbestos cement can break under pressure in the landfill and release fibres, which harm human health.

The preliminary view of the Waste Unit of DG Environment is that asbestos cement should rather be landfilled in a landfill for non-hazardous waste in accordance with Article 6 c iii). This Provision concerns the landfilling of non-reactive hazardous waste in landfills for non-hazardous waste. Such wastes shall have a leaching behaviour equivalent to that of non-hazardous waste and shall not be deposited in cells-destined for biodegradable non-hazardous waste. The advantage of this Option is that these landfills will be equipped with a better protection System, in particular they will in general have a surface sealing.

The question if asbestos cement should be classified as a hazardous waste is currently being discussed in the TAC sub-group for the Hazardous Waste List.

2 Criteria for the acceptance of waste at landfills for inert waste

Annex 3 contains the parameters and limit values that have been proposed. Table 1 contains parameters and limit values for the eluate. Table 2 contains parameters and limit values for the total content.

The limit values have been proposed by Austria and Germany. The limit values submitted by Italy have not been included as they do not concern the waste itself but the release of the pollutants into the environment. Such limit values would have to be multiplied by a certain factor.

The limit values for the eluate are related to the DIN 38414-S4 test, a simple leaching test with a l/s ratio of 10 l/kg. The limit values for the total content are related to aqua regia dissolution.

The United Kingdom is in favour of calculating the limit values in mg/kg as this facilitates the comparison of wastes. The United Kingdom suggests that for some parameters other tests than leaching tests should be used (e.g. the organic content should be assessed through loss on ignition) and that not every waste should be tested for every parameter. A decision tree to determine the relevant parameters will be provided by the United Kingdom.

It should be discussed what the appropriate limit values should be, what other limit values can be set or what ever criteria are necessary.

The following criteria according to the definition of inert waste in Article 2 e should be considered:

- stability (low solubility)
- flammability
- reactivity, explosiveness
- ecotoxicity of the leachate

Annex I List of wastes acceptable at landfills for inert waste

EWC Code	Description	Exclusions
10 00 00	Inorganic wastes from thermal processes	
101100	Wastes from manufacture of glass and glass products	
10 11 02	Waste glass	
10 11 03	Waste glass based fibrous materials	
15 00 00	Packaging; absorbents, wiping cloths, Filter materials and protective clothing not otherwise specified	
New 15 01 07	Glass packaging	
17 00 00	Construction and demolition waste (including road construction)	
17 01 00	Concrete, bricks, tiles, ceramics, and gypsum based construction materials	
17 01 01	Concrete	
1701 02	Bricks	
170103	Tiles and ceramics	
17 02 00	Wood, glass and plastic	
17 02 02	Glass	
17 05 00	Soil and dredging spoil	
17 05 01	Soil and stones	Excluding top soil, peat
20 00 00	Municipal waste and similar commercial, industrial and institutional waste including separately collected fractions	
20 01 00	Separately collected fractions.	
20 01 02	Glass	
20 02 00	Garden and park waste (Including cemetery waste)	
20 02 02	Soil and stones	Excluding top soil, peat

Annex 2 List of proposed wastes not included in the list

01 01 02	Waste from the mineral non-metaliferous excavation	More information is necessary
01 02 02	Waste from the dressing of non-metaliferous minerals	More information is necessary
01 04 01	Waste gravel and crushed rocks	More information is necessary
01 04 02	Waste sand and clay	More information is necessary
01 04 03	Dusty and powdery waste	Could be non-inert; more information is necessary
01 04 05	Waste from washing and cleaning of minerals	Could contain metal.
01 04 06	Waste from stone cutting and sawing	Could contain metal and other materials.
01 05 04	Freshwater drilling muds and wastes	More Information is necessary.
02 04 01	Soil from cleaning and washing beer	Contains organic material eg leaves
10 01 01	Bottom ash	More information is necessary.
10 01 12	Spent lining and refractories	More information is necessary.
10 02 06		
10 04 08		
10 05 07		
10 06 08		
10 07 06		
10 11 08		
10 12 07		
10 12 09		
10 13 08		
10 02 01	Sorted waste from processing of slag from iron industry	More information is necessary.
10 12 01	Waste preparation mixture before thermal processing	More information is necessary.
17 01 04	Gypsum based construction material	Can react and release gases
170105	Asbestos based construction material	Can break under pressure and release fibres.
17 03 02	Asphalt (not containing tar)	Not inert.
17 05 02	Dredging spoil	More information is necessary.
17 06 02	Insulation material containing asbestos ..	Hazardous; not inert
19 04 01	Vitrified waste	Not inert.

Annex 3 Limit values

Table 1 *Limit values for the eluate proposed by A and D, Parameters proposed by the UK*

PARAMETER	LIMIT VALUES
pH value	A:6 to13, D: 5,5 to 8; UK
Electrical Conductivity	A: 300 mS/m, D:5mS/m; UK
Dry residue	A: 25,000 mg/kg
Aluminium (as Al)	A: 20 mg/kg; UK
Arsenic (as As)	A: 0.75. mg/kg; D: 0.1 mg/kg; UK
Boron (as B)	A: 30 mg/kg; UK
Barium (as Ba)	A: 20 mg/kg; UK
Lead (as Pb)	A: 2 mg/kg; D: 0.2 mg/kg (20 ug/l); UK
Cadmium (as Cd)	A: 03 mg/kg D:0.02mg/kg(2ug/l); UK
Chromium (as Cr)	A: 2 mg/kg; D:0.15mg/kg (15ug/l); UK
Chrome, hexavalent (as Cr)	A: 0.5 mg/kg
Cobalt (as Co)	A: 2mg/kg; UK
Iron (as Fe)	A: 10 mg/kg; UK
Copper,(as Cu)	A: 10.0 mg/kg; D: 0.5 mg/kg (50 ug/l); UK
Nickel (as Ni)	A: 2 mg/kg; D: 4mg/kg (50 ug/l); UK
Mercury (as Hg)	A: 0.005 mg/kg; D: 0.002 mg/kg (0,2 ug/l);UK
Silver(as As) .	A: 1 mg/kg; UK
Zinc (as Zn)	A: 20 mg/kg; UK
Tin (as Sn)	A: 20 mg/kg; UK
Kjeldahl Nitrogen (as N)	UK
Ammonium (as NH ₄)	UK
Ammonium (as N)	A: 40 mg/kg
Chloride (as Cl)	A: 5,000 mg/kg; D: 10 mg/kg; UK
Thallium	D: 0.01 mg/kg (1 ug/l)
Cyanide (as CN)	D:0.1 mg/kg(10 ug/l); UK
Cyanide, easily releasable (as CN)	A: 1 mg/kg
Fluoride (as F)	A: 50 mg/kg, UK
Nitrate (as NO ₃)	A: 500 mg/kg; UK
Nitrite (as NO ₂)	A: 10 mg/kg; UK
Sulphate (as SO ₄)	A: 5000 mg/kg; UK
Selenium (as Se)	UK
Phenols (as C ₆ H ₅ OH)	D: 0.1mg/kg (10 ug/l); UK
Phosphate (as P ₂ O ₅)	UK
TOC (as C)	A: 500 mg/kg; UK
Total of hydrocarbons	A: 50 mg/kg; D: 100 mg/kg
EOX (as Cl)	D: 1 mg/kg
BTEX	D: 1 mg/kg
LHKW	D: 1 mg/kg
Total PAH + EPA	D: 1 mg/kg
Total PCB	D: 1 mg/kg

PARAMETER	LIMIT VALUES
Anion-active tenside (as TBS)	A:5mg/kg

Table 2 Parameters for which other tests than leaching tests are deemed necessary (UK):

Cyclohexane extract	
Organic Content	Loss on ignition
Mineral Oils	
Organochlorine compounds	
Pesticides	
PAHs	

Table 3: Limit values for total contents in waste proposed by A and D

PARAMETERS	LIMIT VALUES
Arsenic (as As)	A: 200 mg/kg; D:20mg/kg
Lead (as Pb)	A: 500 mg/kg; D: 100 mg/kg
Cadmium (as Cd)	A:10 mg/kg; D: 0.6 mg/kg
Chromium total (as Cr)	A: 500 mg/kg; D:50mg/kg
Cobalt (as Co)	A: 100 mg/kg
Copper (as Cu)	A: 500 mg/kg; D: 40 mg/kg
Nickel (as NO	A: 500 mg/kg; D: 40 mg/kg
Mercury (as Hg)	A:3 mg/kg; D: 0.3 mg/kg
Thallium	D: 0.5 mg/kg
Zinc (as Zn)	A: 1500 mg/kg; D: 120 mg/kg
Cyanide	D: 1 mg/kg
Total of organically bound carbon TOC (as C)	A: 30,000 mg/kg
Total of hydrocarbons	A: 100 mg/kg; D: 100 mg/kg
Total of PAHs	A: 2.0 mg/kg