

September 2016

## **Draft bill**

of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety

### **Ordinance reorganising sewage sludge utilisation**

#### **A. Problem and objective**

Sewage sludge from municipal waste water treatment plants contains significant quantities of phosphorus. Given its crucial importance, phosphorus is a vital resource, but one which is only available in finite quantities, and a significant proportion is used for fertiliser purposes in agriculture as well as in many and varied industrial processes.

In order to cover its demand for phosphorus, Germany, just like virtually the whole of the EU, is entirely dependent on imports from predominantly politically unstable regions. The extraction of rock phosphate in the countries of origin and its processing into mineral fertilisers entails considerable environmental impacts and heavy energy demands.

From the point of view of resource efficiency, it is therefore necessary in future to utilise the phosphorus contained in the municipal sewage sludge to a greater extent than has been the case previously. Currently, as regards conventional, land-based utilisation of the sewage sludge, such utilisation takes place in accordance with requirements under fertiliser law as well as in accordance with the Sewage Sludge Ordinance. Given the significant variations between the Federal States, the acceptance and importance of land-based sewage sludge utilisation is declining continuously, meaning that in the meantime, the vast majority of sewage sludge is incinerated but without the proportion of phosphorus contained in the ashes being returned to the economic cycle.

The Ordinance essentially obligates the operators of waste water treatment plants, as sewage sludge producers, and the operators of sewage sludge incineration facilities or sewage sludge co-incineration facilities to recover the phosphorus contained in sewage

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sludge or in sewage sludge incineration ashes following a staggered transitional period of twelve to fifteen years following the entry into force of the Ordinance. Parallel to this, land-based sewage sludge utilisation, as has been practised hitherto, is to be restricted significantly.

When recovered phosphorus – in the form of phosphate – is used, it is mainly for fertilisation purposes. It is therefore necessary that the recovered material is generally available in a form which renders it available to plants and which is less-polluting or is processed prior to utilisation in such a way that plant availability is guaranteed. The corresponding specific requirements in terms of availability to plants are the subject of stipulations under fertiliser law.

By means of the Ordinance, in light of the stipulation under the coalition agreement concerning the 18th legislative period, the initiation of the recovery of phosphorus and other nutrients from sewage sludge and termination of land-based sewage sludge fertilisation is to be enshrined in law.

## **B. Solution**

Enactment of this Ordinance.

## **C. Alternatives**

None.

## **D. Budget expenditure without compliance costs**

The draft Ordinance is not expected to entail any significant additional burden for the budgets of public authorities.

## **E. Compliance costs**

### **E.1 Compliance costs for citizens**

No compliance costs shall be incurred by citizens.

### **E.2 Compliance costs for business**

Annual compliance costs of between EUR 94.9 million and EUR 118.6 million, of which approximately EUR 0.9 million to EUR 3 million for administration costs and between EUR 0.5 million and EUR 63.4 million for material costs, shall be incurred as a result of 16 stipulations and 41 obligations to provide information. Most of these costs will be due to the obligation to recover phosphorus following the end of the twelve- to fifteen-year transitional period for land-based sewage sludge utilisation.

In addition, one-off reorganisation costs ranging from EUR 124 to 477 million shall be incurred. Most of these will be due to the cost of investing in phosphorus recovery techniques.

The extensive span in terms of the data on costs stems from the fact that it is not possible to forecast precisely the extent to which, following the expiry of the transitional period, sewage sludge will still be applied onto or into land and, consequently, it cannot be predicted precisely either to what extent the infrastructure for phosphorus recovery will need to be supplemented.

The compliance costs shall generally be financed through the levying of municipal waste water charges and shall therefore be refunded to the parties addressed by the provision.

### **E.3 Administrative compliance costs**

According to Article 83 of the Basic Law, responsibility for implementation of the Ordinance reorganising sewage sludge utilisation essentially rests with the Federal States. This amendment does not establish any new responsibilities for Federal authorities. Additional administrative expense totalling approximately EUR 0.9 to 1.6 million shall be incurred annually. With expenditure of just under EUR 40,000 per annum for the Federal administration, this administrative expense is incurred almost exclusively at Federal State and municipal level.

Moreover, one-off reorganisation costs amounting to approximately EUR 1 million to EUR 1.1 million shall arise, with the Federal Government share in this regard roughly EUR 76,000.

### **F. Further costs**

The annual compliance costs of between EUR 94.9 million and EUR 118.6 and the one-off reorganisation costs ranging from EUR 124 million to EUR 477 million are generally financed by citizens through the levying of municipal charges.

Implementation of the stipulations under the Ordinance will result in an increase in waste water charges varying from region to region; a research project commissioned by the Federal Environment Agency on behalf of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety estimated at least 30 cents annually per citizen for phosphorus recovery measures. However, this applies, to regions that already have facilities for the thermal treatment of sewage sludge. In regions which do not yet have facilities for the thermal treatment of sewage sludge, additional costs in the amount of at least EUR 4.30 per annum per citizen are assumed.

All told, given the present lack of experience in some cases as regards the industrial-scale execution of phosphorus recovery from sewage sludge, detailed information on the costs of implementing the Ordinance is not available.

Selling recovered phosphorus can generate small amounts of revenue which will have a dampening effect on increases in charges. However, when taking as a basis the current market prices for phosphorus fertilisers, the revenue which can be generated in relation to recycled phosphorus cannot generally as yet offset the additional costs of phosphorus recovery from sewage sludge or from sewage sludge ashes.

No effects on individual prices and price levels, particularly consumer price levels, are anticipated.

**Draft bill**

of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety

**Ordinance reorganising sewage sludge utilisation**

On the basis of

- § 8(2) sentence 1 point 2, in conjunction with § 67, of the Waste Recovery and Recycling Act of 24 February 2012 (Federal Law Gazette I p. 212), while safeguarding the rights of the *Bundestag*,
- § 11(2) sentence 1 points 1 and 3 to 5, also in conjunction with sentence 2, § 11(3) sentence 1 points 1 to 3 and point 4, in conjunction with § 10(2) points 1a and 1b and points 5 to 7, also in conjunction with § 10(3) and § 11(3) sentence 2 point 1, of the Waste Recovery and Recycling Act of 24 February 2012 (Federal Law Gazette I p. 212), and
- § 12(7) points 1 to 7 and § 52(1) sentence 2 point 7 of the Waste Recovery and Recycling Act of 24 February 2012 (Federal Law Gazette I p. 212),

following consultation with the parties involved, the Federal [German] Government decrees the following:

## **Article 1**

### **Ordinance on the utilisation of sewage sludge, sewage sludge mixtures and sewage sludge compost (Sewage Sludge Ordinance)<sup>1)2)</sup>**

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<sup>1)</sup> This Ordinance serves to transpose

- Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture (OJ L 181 of 4.7.1986, p. 6), last amended by Regulation (EC) No 219/2009 (OJ L 87 of 31.3.2009, p. 109), and
- Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market (OJ L 376 of 27.12.2006, p. 36).

<sup>2)</sup> Notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (OJ L 241 of 17.9.2015, p. 1).

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**Part 1**  
**General provisions**

**§ 1**  
**Area of application**

(1) This Ordinance governs

1. the application and incorporation of sewage sludge, sewage sludge mixtures and sewage sludge compost for utilisation as a substance in accordance with § 2 points 1 and 6 to 8 of the Fertiliser Act of 9 January 2009 (Federal Law Gazette I p. 54), last amended by Article 370 of the Ordinance of 31 August 2015 (Federal Law Gazette I p. 1474), in its current version, onto or into a soil
  - a) which is used for agricultural purposes,
  - b) in connection with landscaping measures,
  - c) which is used for forestry purposes and
  - d) which is used in a household garden, kitchen garden or allotment garden;
2. the delivery of sewage sludge to produce a sewage sludge mixture or compost;
3. the delivery of sewage sludge, a sewage sludge mixture and sewage sludge compost for the purposes mentioned in point 1;
4. the treatment and investigation of such sewage sludge, as well as mixtures and composts thereof, and
5. investigation of the soil onto or into which the sewage sludge, sewage sludge mixture and sewage sludge compost are to be applied or incorporated.

(2) This Ordinance shall apply to

1. sewage sludge producers,
2. mixture manufacturers,
3. compost producers,
4. parties which utilise sewage sludge,
5. quality assurance agencies within the meaning of § 12(5) of the Waste Recovery and Recycling Act,
6. quality mark owners within the meaning of § 12(2) of the Waste Recovery and Recycling Act and

7. carriers.

(3) In the case of the shipment of a sewage sludge or a sewage sludge mixture or compost within the scope of the Waste Recovery and Recycling Act, the provisions of this Ordinance which apply to the sewage sludge producer, mixture manufacturer or compost producer shall apply accordingly to the importer of this sewage sludge, sewage sludge mixture or sewage sludge compost.

(4) This Ordinance shall not apply to the sludges mentioned in Annex 1 to the Biowaste Ordinance in the version published on 4 April 2013 (Federal Law Gazette I p. 658), last amended by Article 5 of the Ordinance of 5 December 2013 (Federal Law Gazette I p. 4043), provided

1. the waste water treated in this regard has not been mixed with household or municipal waste water in accordance with § 2(4) point 1 and
2. the waste water sludge complies with the provisions of the Biowaste Ordinance.

(5) The provisions under fertiliser law remain unaffected.

## **§ 2**

### **Definitions**

(1) The definitions under paragraphs 2 to 19 shall apply to this Ordinance.

(2) Sewage sludge is understood to mean waste, including waste which has been dehydrated or dried and treated in planting beds or in another form, accruing from waste water treated in waste water treatment plants and which comprises water as well as organic and mineral substances, with the exception of screening residues and sand trap residues.

(3) Crude sludge is non-stabilised or partly stabilised sludge which is removed from waste water treatment plants prior to the completion of waste water treatment.

(4) Waste water is understood to mean

1. household and municipal waste water which accrues within the scope of Annex 1 to the Waste Water Ordinance in the version published on 17 June 2004 (Federal Law Gazette I pp. 1108, 2625), last amended by Article 1 of the Ordinance of 1 June 2016 (Federal Law Gazette I p. 1290), in its current version, and
2. waste water which has been treated in an in-house waste water treatment plant and which is comparable to the waste water as per point 1 in terms of its material composition.

(5) A waste water treatment plant is understood to mean a stationary installation in which the harmfulness to health of the waste water is physically, biologically or chemically diminished or eliminated.

(6) A small sewage treatment plant is understood to mean a waste water treatment plant for treating household and municipal waste water with a waste water inflow of less than 8 m<sup>3</sup> per day or less than 50 population equivalents.

(7) A sewage sludge mixture is understood to mean a mix of sewage sludge and other materials as per Appendix 2 Tables 7 and 8 of the Fertiliser Ordinance of 5 December 2012 (Federal Law Gazette I p. 2482), as amended by Article 1 of the Ordinance of 17 May 2015 (Federal Law Gazette I p. 886) in its current version; a mix comprising various sewage sludges does not constitute a sewage sludge mixture.

(8) A sewage sludge compost is understood to mean a substance which originates under aerobic conditions as a result of the controlled biodegradation of the organic matter in a sewage sludge mixture.

(9) Sewage sludge treatment comprises measures associated with the biological, physical or chemical stabilisation of sewage sludge.

(10) The delivery of sewage sludge is understood to mean

1. the delivery of the sewage sludge by the sewage sludge producer to the party utilising the sewage sludge, the mixture manufacturer or the compost producer as well as
2. the delivery of the sewage sludge mixture manufactured or the sewage sludge compost produced by the mixture manufacturer or the compost producer to the party utilising the sewage sludge.

Interim storage of the substances mentioned in sentence 1 points 1 and 2 by the sewage sludge producer, the mixture manufacturer or the compost producer, or by a third party who is entrusted with interim storage by one of these individuals does not constitute delivery of sewage sludge.

(11) A sewage sludge producer is understood to mean the operator of a waste water treatment plant.

(12) A mixture manufacturer is understood to mean any natural person or legal entity or association of individuals who or which produce a sewage sludge mixture.

(13) A compost producer is understood to mean any natural person or legal entity or association of individuals who or which produce a sewage sludge compost.

(14) Soil used for agricultural purposes is understood to mean cultivated arable land, land used for horticultural purposes, grassland, fruit plantations, land used to grow fast-growing

forest trees for energy production, land used for wine-growing, land under hops and tree nurseries; soil used for agricultural purposes also includes land taken out of production for limited periods, provided that this is supplied with fertilisers, soil additives, growing media or plant additives. Soil not used for agricultural purposes includes land in self-contained or non-land agricultural areas.

(15) Soil associated with landscaping measures is land

1. which is cultivated without being utilised for agricultural or forestry purposes or
2. on which a soil layer through which roots can penetrate is established.

Landscaping grounds include, in particular, recultivation areas, roadside verges, embankments, noise protection embankments, sports grounds and public parks situated within built-up areas.

(16) An importer is understood to mean any natural person or legal entity or association of individuals who or which ships sewage sludge, a sewage sludge mixture or sewage sludge compost for utilisation on or in a soil into the area covered by the Waste Recovery and Recycling Act, or who makes arrangements for such shipments. Any party who simply effects transit traffic where no treatment or processing of the sewage sludge, sewage sludge mixture or sewage sludge compost is undertaken does not constitute an importer.

(17) A party utilising the sewage sludge is understood to mean any natural person or legal entity or association of individuals who or which, as the proprietor or tenant of an area of land, applies or incorporates sewage sludge, a sewage sludge mixture or sewage sludge compost, or intends to do this.

(18) A carrier is understood to mean any natural person or legal entity who or which transports sewage sludge, sewage sludge mixtures or sewage sludge compost using vehicles intended to carry goods on a commercial basis or in the context of economic activities and, hence, by reason of a commercial or economic activity which is not directed at the transportation of sewage sludge. Transport also includes cross-border shipment. Carriers also include importers who or which themselves ship the sewage sludge, sewage sludge mixture or sewage sludge compost.

(19) The first-time application or incorporation of sewage sludge, sewage sludge mixtures or sewage sludge compost onto or into a soil describes the date when the sewage sludge, sewage sludge mixture or sewage sludge compost was applied or incorporated for the first time after 1 April 1983.

### **§ 3**

#### **Recycling management of sewage sludge, sewage sludge mixtures and sewage sludge compost**

(1) Wherever possible, sewage sludge producers shall utilise the high-grade materials from the sewage sludge accruing in their waste water treatment plant provided this is technically feasible and economically viable. In so doing, the aim is to recover phosphorus and return the sewage sludge incineration ash containing phosphorus to the economic cycle.

(2) A sewage sludge producer, mixture manufacturer or compost producer who utilises sewage sludge, a sewage sludge mixture or sewage sludge compost on or in a soil shall do so in accordance with the requirements laid down in this Ordinance.

### **Part 2**

#### **Requirements in terms of the utilisation of sewage sludge, sewage sludge mixtures and sewage sludge compost on and in soils**

### **Section 1**

#### **Investigation obligations**

### **§ 4**

#### **Land-based investigation obligations**

(1) Prior to the first-time application or incorporation of the sewage sludge on the area of application or incorporation communicated by the party utilising the sewage sludge in accordance with § 16(1) sentence 1, the sewage sludge producer shall

1. arrange for the soil texture in the area of application or incorporation as per DIN 19682-2 "Soil quality - Field tests - Part 2: Determination of soil texture", publication date: July 2014, to be determined and
2. arrange for a soil investigation in relation to the heavy metals mentioned in point 4.1 of Annex 2 to the Federal Soil Protection and Contaminated Sites Ordinance as well as in relation to the pH value in accordance with the provisions under § 32(1) and (2).

The obligations under sentence 1 shall apply to the mixture manufacturer or compost producer in the case of the first-time application or incorporation of a sewage sludge mixture or compost. If a proper soil investigation has already been carried out in accordance with the Biowaste Ordinance, the party obligated under sentences 1 or 2 may use the results of this investigation provided these are not more than 10 years old.

(2) If the investigation of the sewage sludge as per § 5(2) points 1 and 3 reveals that the permitted limit value for polychlorinated biphenyls or benzo(a)pyrene according to § 8(1) is fully utilised by more than 70%, the party obligated under paragraph 1 sentences 1 or 2 shall also arrange, prior to the application or incorporation of a sewage sludge, sewage sludge mixture or sewage sludge compost after ... [insert: the date of the day six months after the entry into force of this Ordinance in accordance with Article 8(1)] for the contents of the soil in terms of polychlorinated biphenyls or benzo(a)pyrene to be investigated in accordance with the provisions under § 32(1) and (2).

(3) If, in a given case, there are indications that the soil designated for the application or incorporation of sewage sludge, sewage sludge mixtures or sewage sludge composts has an excessive level of pollutants other than those mentioned in paragraph 1 sentence 1 point 2, in the event of application onto, or incorporation into, soil used for agricultural purposes, the competent authority shall, in consultation with the competent specialist agricultural authority, order an investigation of the soil for these pollutants.

(4) The soil investigation as per paragraph 1 sentence 1 point 2 must be repeated at least every ten years. The soil investigation as per paragraph 2 must be repeated at least every ten years as long as the preconditions under paragraph 2 regarding the exhaustion of the limit values in the case of polychlorinated biphenyls or benzo(a)pyrene are consistently available.

(5) The competent authority may, in the event of application onto, or incorporation into, soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, shorten the interval between the investigations and, at the request of the party obligated under paragraph 1 sentences 1 and 2, limit the soil investigations to individual heavy metals referred to in paragraph 1 sentence 1 point 2 or to the pH value.

(6) Paragraph 1 sentence 1 shall not apply when applying or incorporating sewage sludge from an agricultural establishment's own small sewage treatment plant onto or into soils which it cultivates itself.

(7) With the consent of the competent authority, in the event of application onto, or incorporation into, soil used for agricultural purposes, and in consultation with the competent specialist agricultural authority, as regards the application or incorporation of sewage sludge from waste water treatment plants with an approved design capacity of less than 1 000 population equivalents, the repeat investigations as per paragraph 4 may be dispensed with.

## § 5

### **Sewage sludge-related investigation obligations**

(1) Prior to delivering the sewage sludge to the party utilising the sewage sludge, the mixture manufacturer or the compost producer, the sewage sludge producer shall have sewage sludge samples investigated in terms of the following parameters in accordance with the provisions under § 32(1) and (3):

1. levels of arsenic, lead, cadmium, copper, nickel, mercury, thallium and zinc,
2. the sum total of the organic halogen compounds in the form of adsorbed organically bound halogens,
3. total nitrogen content,
4. phosphorus content,
5. dry residue,
6. organic matter,
7. the level of alkaline active substances in total, evaluated as calcium oxide,
8. iron content and
9. pH value.

The investigation of the sewage sludge under sentence 1 is to be carried out for every 250 tonnes of dry matter or part thereof, but no more than once a month. In the case of waste water treatment plants where 750 tonnes or less of sewage sludge accrue each year, an investigation as per sentence 1 must be carried out at least every three months.

(2) Prior to delivering the sewage sludge to the party utilising the sewage sludge, the mixture manufacturer or the compost producer, the sewage sludge producer shall have sewage sludge samples investigated in terms of levels of the following organic pollutants in accordance with the provisions under § 32(1) and (3):

1. polychlorinated biphenyls,
2. polychlorinated dibenzodioxins and dibenzofurans, including dioxin-like polychlorinated biphenyls,
3. benzo(a)pyrene and
4. polyfluorinated compounds containing the individual substances perfluorooctanoic acid and perfluorooctane sulfonic acid.

The investigation as per sentence 1 must be repeated at least every two years.

(3) The investigation obligations according to paragraphs 1 and 2 shall apply to the mixture manufacturer or the compost producer in the event of the production of a sewage sludge mixture or a sewage sludge compost provided that the investigation under paragraph 1 sentence 2 is to be carried out for every 500 tonnes of dry matter or part thereof.

(4) The party obligated to conduct the investigation shall present the results of the investigation to the competent authority within four weeks of the respective investigation having been carried out.

(5) If, in a given case, there are indications that a sewage sludge, sewage sludge mixture or sewage sludge compost has an excessive level of contents other than those mentioned in paragraphs 1 to 2, in the event of application onto, or incorporation into, soil used for agricultural purposes, the competent authority may, in consultation with the competent specialist agricultural authority, order that the sewage sludge, sewage sludge compost or sewage sludge mixture be investigated for these contents and shorten the interval between the investigations as per paragraph 2. Levels of the other contents designated in sentence 1 are excessive if, when the sewage sludge, sewage sludge mixture or sewage sludge compost, or the materials envisaged for mixture and compost production in accordance with Appendix 2 Tables 7 and 8 of the Fertiliser Ordinance, are used as intended in pure form, the health of people or domestic and farm animals, the health, growth and quality of crops, and the quality and fertility of the soil or the ecosystem may be jeopardised as a result.

## **§ 6**

### **Limited sewage sludge investigation**

(1) § 5(2) shall not apply when applying and incorporating sewage sludge from an agricultural establishment's own small sewage treatment plant onto and into soils which it cultivates itself. In deviation from § 5(1) sentence 2, the sewage sludge producer shall arrange for the investigations as per § 5(1) sentence 1 to be carried out on a one-off basis prior to initial application or incorporation of the sewage sludge. In deviation from § 5(4), the sewage sludge producer shall present the competent authority with the results of the investigations forthwith.

(2) As regards the application or incorporation of sewage sludge from waste water treatment plants with an approved design capacity of less than 1,000 population equivalents, § 5(1) sentence 2 shall apply with the proviso that sewage sludge from such plants must be examined at least every two years. In the case of utilisation on or in soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, the investigation as per § 5(2) sentence 1 may be dropped with the consent of the competent authority. The competent authority may stipulate a different interval between investigations to that set out in § 5(5). In this regard, however, a reduction to less than six months and an extension to more than four years is excluded.

## **Section 2**

### **Limit values; epidemic hygiene and phytohygiene**

#### **§ 7**

##### **Land-based limit values**

(1) The application or incorporation of the sewage sludge, sewage sludge mixture or sewage sludge compost onto or into the soil is only permitted if the soil investigation as per § 4(1) sentence 1 point 2, paragraph 2 and paragraph 4 reveals that the precautionary values for metals as per point 4.1 and for the organic substances polychlorinated biphenyls and benzo(a)pyrene as per point 4.2 of Annex 2 to the Federal Soil Protection and Contaminated Sites Ordinance of 12 July 1999 (Federal Law Gazette I p. 1554), last amended by Article 102 of the Ordinance of 31 August 2015 (Federal Law Gazette I p. 1474), are not exceeded. Point 4.3 of Annex 2 to the Federal Soil Protection and Contaminated Sites Ordinance shall apply accordingly to application of the precautionary values.

(2) In the case of changing soil textures over a small area, in the event of the planned application or incorporation of sewage sludge onto or into soil used for agricultural purposes, the competent authority may, in consultation with the competent specialist agricultural authority, and at the request of the sewage sludge producer, stipulate application of the precautionary values in accordance with paragraph 1 according to the prevailing soil texture. Sentence 1 shall apply accordingly to the mixture manufacturer or compost producer in the case of the application or incorporation of a sewage sludge mixture or compost.

(3) As regards geogenically determined, increased heavy metal background values in the soil, in the event of planned application onto, or incorporation into, soil used for agricultural purposes, the competent authority may, in consultation with the competent specialist agricultural authority, and at the request of the sewage sludge producer, approve application or incorporation despite the precautionary values mentioned in paragraph 1 sentence 1 being exceeded, with the exception of the precautionary value for cadmium, provided the area of application or incorporation is situated within the area of jurisdiction of the authority responsible for enforcement of this Ordinance at the main office of the waste water treatment plant. Sentence 1 shall apply accordingly to the mixture manufacturer or compost producer in the case of the application or incorporation of a sewage sludge mixture or compost.

#### **§ 8**

##### **Sewage sludge-related limit values**

(1) The delivery of sewage sludge by the sewage sludge producer and the application and incorporation of sewage sludge onto and into the soil is only permitted if the investigations

as per § 5(1) and (2) reveal that the limit values under Appendix 2 Table 1.4 column 4 of the Fertiliser Ordinance, as well as the additional limit values as per Appendix 1, are not exceeded. The maximum permitted content according to Appendix 1 Section 4.1 point 4.1.1 column 6 paragraph 2 of the Fertiliser Ordinance shall apply as the limit value to copper as a heavy metal.

(2) When producing a sewage sludge mixture or a sewage sludge compost, the limit values as per paragraph 1 shall apply, with the proviso that these values shall apply to both the sewage sludge prior to mixing and to the sewage sludge mixture or sewage sludge compost produced. As regards the materials used in the production of a sewage sludge mixture or a sewage sludge compost as per § 2(7), the mixture manufacturer or compost producer must observe the requirements laid down in the Fertiliser Ordinance.

## **§ 9**

### **Reserve sample**

(1) In order to monitor the limit values mentioned in § 8(1), the competent authority may obligate the sewage sludge producer, the mixture manufacturer and the compost producer to take a reserve sample from the sewage sludge, sewage sludge mixture or sewage sludge compost envisaged for delivery or application or incorporation. Sampling shall take place in accordance with § 32(3).

(2) The sewage sludge producer, mixture manufacturer and compost producer must store the reserve sample for at least five years from the time it is taken. The reserve sample must be processed and stored in such a way that its quality does not alter during the period of storage.

(3) The competent authority may order the investigation of a reserve sample in terms of the contents mentioned in § 5(1) and (2) in accordance with the provisions under § 32. If, in a given case, there are indications that the reserve sample has an excessive level of contents other than those mentioned in sentence 1, the competent authority may order the investigation of the reserve sample for these other contents.

(4) The parties obliged to store reserve samples in accordance with paragraph 1 must return the reserve samples to the competent authority on request.

## **§ 10**

### **Analysis errors and measurement tolerances**

When investigating compliance with a limit value as per § 7(1) or § 8, standardised deductions from the stipulated limit value may not be carried out on account of possible analysis errors or measurement tolerances.

## **§ 11**

### **Requirements in terms of epidemic hygiene and phytohygiene**

The delivery of a sewage sludge, sewage sludge mixture or sewage sludge compost and the application and incorporation of the same onto or into the soil are only permitted if the sewage sludge, sewage sludge mixture or sewage sludge compost complies with the requirements in terms of epidemic hygiene and phytohygiene in accordance with § 5(1) to (3) of the Fertiliser Ordinance in its current version.

## **Section 3**

### **Delivery, application and incorporation of sewage sludge**

## **§ 12**

### **Delivery of sewage sludge**

(1) The sewage sludge producer shall deliver the sewage sludge directly to a party which utilises it. Entrusting a third party with transport of the sewage sludge does not preclude direct delivery. The sewage sludge producer shall apply or incorporate the sewage sludge.

(2) By way of derogation from paragraph 1, the sewage sludge producer may deliver the sewage sludge

1. to a mixture manufacturer in order to produce a sewage sludge mixture or to a compost producer in order to produce a sewage sludge compost or
2. to a quality mark owner in order to conduct routine quality assurance of the sewage sludge,

provided it is ensured that the mixture manufacturer delivers the manufactured sewage sludge mixture, the compost producer the manufactured sewage sludge compost or the quality mark owner the sewage sludge which has undergone routine quality assurance directly to the party utilising the sewage sludge. The mixture manufacturer shall apply or incorporate the manufactured sewage sludge mixture, the compost producer the manufactured sewage sludge compost or the quality mark owner the sewage sludge which has undergone routine quality assurance.

### **§ 13**

#### **Provision of sewage sludge**

(1) The sewage sludge producer whose intention it is to apply or incorporate a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into a soil, may only provide the sewage sludge, sewage sludge mixture or sewage sludge compost as follows:

1. only on the soil envisaged for application or incorporation or on adjoining arable land,
2. only in the quantity required for application or incorporation onto or into the soil, and
3. for no more than a period of two weeks prior to application or incorporation.

The sewage sludge, sewage sludge mixture or sewage sludge compost shall be provided in such a way that a surface run-off of the same is impossible.

(2) A transgression of the period of time under paragraph 1 sentence 1 point 3 is only permitted if the application or incorporation of the sewage sludge, sewage sludge mixture or sewage sludge compost supplied is impossible on account of the unforeseeable impracticability of the soil at the time application or incorporation is envisaged.

### **§ 14**

#### **Application and incorporation quantity**

(1) Over a three-year period, no more than five tonnes of sewage sludge dry matter per hectare may be applied onto, or incorporated into, a soil. In deviation from sentence 1, a one-off application or incorporation of up to 10 tonnes of sewage sludge dry matter per hectare is permitted onto or into a soil in connection with landscaping measures provided, over the last six years prior to application or incorporation, no such application or incorporation has taken place.

(2) If no application or incorporation of sewage sludge onto or into the soil as per paragraph 1 has taken place, sewage sludge mixtures or sewage sludge composts with a proportion of sewage sludge of up to five tonnes of dry matter may be applied onto, or incorporated into, every hectare of soil over a three-year period. In deviation from sentence 1, sewage sludge composts with a proportion of sewage sludge of up to 10 tonnes of dry matter may be applied onto, or incorporated into, every hectare of the area of application or incorporation over a six-year period. In deviation from sentences 1 and 2, sewage sludge mixtures or sewage sludge composts with a proportion of sewage sludge of up to 20 tonnes of dry matter may be applied onto, or incorporated into, a soil in connection with landscaping measures over every hectare of the area of application or incorporation, provided no application or incorporation has taken place on this area over a ten-year period prior to application or incorporation. When establishing a penetrable soil layer, sewage sludge

mixtures and sewage sludge composts may only be used for the top layer of soil with a thickness not exceeding 30cm.

(3) § 12(7) of the Federal Soil Protection and Contaminated Sites Ordinance shall apply accordingly to landscaping applications.

## **§ 15**

### **Restricting sewage sludge utilisation**

(1) The delivery and application or incorporation of sewage sludge from plants other than waste water treatment plants, or of raw sludge, is not permitted.

(2) The delivery and the application or incorporation of sewage sludge from a small sewage treatment plant is not permitted if the sewage sludge is covered by compulsory connection and usage up to the point of waste water disposal as regulated under water law.

(3) The delivery and the application or incorporation of a sewage sludge which has been mixed with sewage sludges from waste water treatment plants with an approved design capacity upwards of 1,000 population equivalents is only permitted if it involves sewage sludges from waste water treatment plants belonging to the same sewage sludge producer and the sewage sludges fulfil the requirements under §§ 8 and 11 prior to mixing.

(4) The application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into soil used for agricultural purposes is not permitted if the sewage sludge has accrued in a waste water treatment plant in which waste water arising from industrial potato processing has been treated.

(5) The application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into soil used

1. as grassland,
2. as arable fodder areas under cultivation,
3. as a cultivation area for maize, except for grain use, if no incorporation of the sewage sludge has taken place prior to sowing,
4. as a cultivation area for sugar beets, if the sugar beet leaves are to be used as animal feed and no application or incorporation of the sewage sludge has taken place prior to sowing in the year of cultivation,
5. as a cultivation area for vegetables, fruit or hops,
6. as a household garden, kitchen garden or allotment garden, or
7. for forestry purposes is not permitted.

The application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into arable land which is also used to cultivate field vegetables is only permitted if an interval of at least 24 months is observed between the most recent application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost and the next cultivation of field vegetables.

(6) The application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into a soil

1. in water protection areas in protected zones I and II and
2. in nature conservation area, national parks, national natural monuments, protected areas and legally protected biotopes is not permitted.

In deviation from sentence 1 point 2, the competent authority may, at the request of the party utilising the sewage sludge, in consultation with the competent nature conservation agency and the specialist agricultural authority, allow the application or incorporation of a sewage sludge, a sewage sludge mixture or a sewage sludge compost onto or into soil used for agricultural purposes.

## **Section 4**

### **Notification and delivery note procedures**

#### **§ 16**

##### **Notification procedure**

(1) The party utilising the sewage sludge shall disclose to the sewage sludge producer the precise designation of the area of application or incorporation designated for the application or incorporation of sewage sludge according to district, field, plot number and size in hectares. The authority responsible for the area of application or incorporation may, on request, in the case of application or incorporation onto or into soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, also approve an alternative proof of conformity with zoning regulations if, in so doing, the area of application or incorporation is covered with comparable accuracy. If it is the intention of the party utilising the sewage sludge to apply or incorporate a sewage sludge mixture or compost, the specific area of application or incorporation as per sentence 1 must be disclosed to the mixture manufacturer or compost producer.

(2) No later than three weeks prior to application or incorporation of the sewage sludge, the sewage sludge producer shall notify the authority responsible for the area of application or incorporation (in the case of application or incorporation onto or into soil used for agricultural purposes, the specialist agricultural authority as well) of his/its intention to apply or incorporate sewage sludge. If it is the intention of the mixture manufacturer or compost

producer to apply or incorporate a sewage sludge mixture or a sewage sludge compost, sentence 1 shall apply to the mixture manufacturer or the compost producer. The competent authority may, in the event of application onto, or incorporation into, soil used for agricultural purposes, in consultation with the specialist agricultural authority, allow notification as per sentences 1 or 2 to be made by no later than one week prior to the intended application or incorporation.

(3) The notification as per paragraph 2 sentence 1 must include the information under Appendix 3 Section 1 point 1, while the notification as per paragraph 2 sentence 2 must include the information under Appendix 3 Section 2 point 1. The sewage sludge producer, mixture manufacturer or compost producer must disclose a change in the date of the intended application or incorporation of the sewage sludge, sewage sludge mixture or sewage sludge compost specified in the notification, or a change in the area of application or incorporation also specified therein, to the competent authority forthwith.

## **§ 17**

### **Delivery note procedure in the case of land-based sewage sludge utilisation**

(1) Prior to delivery of the sewage sludge, the sewage sludge producer shall use or issue a delivery note which must contain the information as per Appendix 3 Section 1 points 2.1 to 2.6. The delivery note must be filled out correctly and in full. When delivering the sewage sludge, the sewage sludge producer shall note the date of delivery on the delivery note in accordance with Appendix 3 Section 1 point 2.7 and, unless the producer him/itself is handling transport, present the carrier with the delivery note. The sewage sludge producer shall retain a copy of the delivery note if he/it has not handled transport him/itself.

(2) The sewage sludge producer, if he/it is transporting the sewage sludge him/itself, or the carrier shall carry the delivery note on board along with, if necessary, the proofs to be included in accordance with Appendix 3 Section 1 points 2.4.6 and 2.6.3, during transportation of the sewage sludge.

(3) The party utilising the sewage sludge shall confirm delivery and the application or incorporation of the sewage sludge onto or into the soil. In the case of the proposed production of a sewage sludge mixture or compost, the mixture manufacturer or compost producer shall confirm delivery of the sewage sludge as a base material in the production of a sewage sludge mixture or sewage sludge compost. The confirmation as per sentences 1 or 2 shall follow as soon as delivery is made and the sewage sludge has been applied to or incorporated into the soil in the form of information on the delivery note as per Appendix 3 Section 1 point 2.8. If application or incorporation of the sewage sludge as per sentence 1 point 1 is only to take place at a later date on account of a provision of sewage sludge as per

§ 13(2), the sewage sludge producer shall note this on the delivery note when the sewage sludge is delivered. In this instance, the sewage sludge producer shall inform the party utilising the sewage sludge of the date of the subsequent application or incorporation as per sentence 4 at the latest five working days after application or incorporation.

(4) If the sewage sludge of a sewage sludge producer is applied onto, or incorporated into, a soil which this sewage sludge producer him/itself uses, paragraph 1 sentence 3 shall not apply.

(5) Following the recording of the information pertaining to delivery and the application or incorporation of the sewage sludge as per paragraph 3 sentences 3 and 4, the carrier, unless transport has been handled by the sewage sludge producer him/itself, shall forward the delivery note, which has been completely filled in and provided with the necessary signatures, to the sewage sludge producer forthwith. A copy of this delivery note shall remain with the carrier.

(6) Within three weeks of application or incorporation at the latest, the sewage sludge producer shall forward each time a copy of the delivery note, which has been completely filled in and has the necessary signatures, to

1. the party utilising the sewage sludge,
2. the carrier, unless transport has been carried out by the sewage sludge producer him/itself,
3. the quality mark owner, if the latter has carried out quality assurance as per Part 3 of this Ordinance instead of the sewage sludge producer,
4. the mixture manufacturer or the compost producer, if the sewage sludge is used as a base material in the production of a sewage sludge mixture or sewage sludge compost,
5. the authority responsible for the sewage sludge producer,
6. the authority responsible for the area of application or incorporation in accordance with § 16(1) sentence 1, and
7. the specialist agricultural authority, if the sewage sludge is applied onto, or incorporated into, soil used for agricultural purposes.

(7) The sewage sludge producer shall retain the original of the delivery note, which has been completely filled in and has the necessary signatures, for ten years, calculated from the date of delivery of the sewage sludge, and shall present it to the competent authorities on request. Sentence 1 shall apply accordingly to the retention and submission of the copy of the delivery note by the party utilising the sewage sludge, the carrier, the mixture manufacturer, compost producer or quality mark owner. Following the end of the period

mentioned in sentence 1, the parties with the retention obligation referred to in sentences 1 and 2 must destroy forthwith the documents mentioned therein.

## **§ 18**

### **Delivery note procedure in the case of land-based utilisation of sewage sludge mixtures and compost**

(1) Prior to delivery of a sewage sludge mixture or compost produced using sewage sludge as per § 17(3) sentence 2, the mixture manufacturer or compost producer shall use or issue a delivery note which must contain the information as per Appendix 3 Section 2 points 2.1 to 2.9. The delivery note must be filled out correctly and in full. When delivering the manufactured sewage sludge mixture or sewage sludge compost to a party utilising the sewage sludge, the mixture manufacturer or compost producer shall note the date of delivery on the delivery note in accordance with Appendix 3 Section 2 point 2.10 and, unless the mixture manufacturer or compost producer is handling transport, present the carrier with the delivery note. A copy of the delivery note shall remain with the mixture manufacturer or compost producer unless they handle transport themselves.

(2) The mixture manufacturer or compost producer, if they handle transport themselves, or the carrier shall carry the delivery note on board along with, if necessary, the delivery notes and proofs to be enclosed with the delivery note in accordance with Appendix 3 Section 2 (the note before point 2.1), points 2.5.7 and 2.9.3, during transportation of the sewage sludge mixture or compost.

(3) The party utilising the sewage sludge shall confirm delivery and the application or incorporation of the sewage sludge mixture or compost onto or into the soil. Confirmation shall follow on the delivery note while the information required is provided in accordance with Appendix 3 Section 2 point 2.11. If the sewage sludge mixture or the sewage sludge compost is provided in accordance with § 13(2) and application or incorporation will only take place at a later date, the mixture manufacturer or compost producer must note this on the delivery note. The mixture manufacturer or compost producer shall inform the party utilising the sewage sludge of the date of the subsequent application or incorporation as per sentence 3 at the latest five working days after application or incorporation.

(4) If the sewage sludge mixture from a mixture manufacturer is applied onto, or incorporated into, a soil which this mixture manufacturer him/itself uses, or if the sewage sludge compost from a compost producer is applied onto, or incorporated into, a soil which this compost producer him/itself uses, paragraph 1 sentence 3 shall not apply.

(5) Following the recording of the information pertaining to the delivery of the sewage sludge mixture or compost as per paragraph 3 sentences 2 and 3 which has taken place, the

carrier, unless the sewage sludge mixture or compost has been transported by the mixture manufacturer or compost producer him/itself, shall forward the delivery note, which has been completely filled in and has the necessary signatures, to the mixture manufacturer or compost producer forthwith. A copy of this delivery note shall remain with the carrier.

(6) The mixture manufacturer or compost producer shall forward each time a copy of the delivery note, which has been completely filled in and has the necessary signatures, to

1. the party utilising the sewage sludge,
2. the carrier of the sewage sludge mixture or the sewage sludge compost, unless transport has been handled by the mixture manufacturer or the compost producer themselves,
3. the sewage sludge producer whose sewage sludge has been used as a base material in the production of the sewage sludge mixture or the sewage sludge compost,
4. the quality mark owner, if the latter has carried out quality assurance as per Part 3 of this Ordinance instead of the mixture manufacturer or compost producer,
5. the authority responsible for the mixture manufacturer or the compost producer,
6. the authority responsible for the sewage sludge producer as per point 3,
7. the authority responsible for the area of application and incorporation in accordance with § 16(1) sentence 3 and
8. the specialist agricultural authority, if the sewage sludge mixture or compost has been applied onto, or incorporated into, a soil used for agricultural purposes.

(7) The mixture manufacturer or the compost producer shall retain the original of the delivery note for ten years from the date of delivery of the sewage sludge mixture or compost and present it to the competent authorities on request. Sentence 1 shall apply accordingly to the retention and submission of the copy of the delivery note by the party utilising the sewage sludge, the carrier, the sewage sludge producer and the quality mark owner. Following the end of the period mentioned in sentence 1, the parties with the retention obligation are referred to in sentences 1 and 2 must delete forthwith the documents mentioned therein.

### **Part 3**

## **Requirements in terms of routine quality assurance**

### **§ 19**

#### **Routine quality assurance**

A routine quality assurance within the meaning of § 12(1) of the Waste Recovery and Recycling Act must comply with the minimum requirements set out in §§ 20 to 31.

### **Section 1**

#### **Quality assurance agency**

### **§ 20**

#### **Approval of the quality assurance agency**

(1) The authority responsible for the approval of a quality assurance agency within the meaning of § 12(5) sentence 2 of the Waste Recovery and Recycling Act is the supreme Federal State authority responsible for waste management in that Federal State in which the quality assurance agency has its head office or the authority appointed by it.

(2) A grouping having legal capacity within the meaning of § 12(5) sentence 1 of the Waste Recovery and Recycling Act shall be recognised as a quality assurance agency if it

1. has appointed an individual responsible for managing and overseeing the agency and who can furnish proof of their power to represent to the competent authority,
2. demonstrates that a technical director and proxy have been appointed,
3. proves that the personnel referred to in points 1 and 2, as well as the other personnel, have the professional competence and expertise required to carry out their work and are independent of the quality mark owners, the partners of the quality assurance agency to be checked and the investigative bodies as per § 33,
4. demonstrates that an adequate number of experts have been appointed who fulfil the requirements mentioned in § 22,
5. demonstrates that an independent committee has been established which fulfils the requirements mentioned in § 23(1),
6. has introduced a management handbook on an obligatory basis; this management handbook includes, in particular, information regarding the strategy, planning and implementation of quality assurance, including the regulations and submissions which are binding on and valid for the organisation, and

7. has laid down graduated measures up to the temporary or permanent withdrawal of the quality mark in order to ensure observance of the quality assurance requirements by the quality mark owner.

(3) Decisions regarding an application for approval as a quality assurance agency shall be made within a period of three months. § 42a(2) sentences 2 to 4 of the Act on administrative procedures shall apply.

(4) Approval as a quality assurance agency shall be valid throughout Germany. Certain conditions and requirements may be attached and it may be subject to certain requirements if this is necessary for ensuring the preconditions governing approval mentioned in paragraph 2.

## **§ 21**

### **Obligations incumbent upon the quality assurance agency**

(1) The quality assurance agency shall ensure that every quality mark owner draws up an individual plan for reducing pollution levels ahead of sewage sludge formation in a waste water treatment plant and for reducing the sanitary risks associated with sewage sludge. In the plan, it must be stipulated in particular that the quality mark owner

1. shall evaluate the register of indirect effluent sources and the monitoring of indirect discharges of the waste water treatment plant and, as and when required, specify optimisation measures to the sewage sludge producer,
2. shall place the sewage sludge producer under an obligation regarding the auditable documenting of the additives used in waste water and sewage sludge treatment, as well as regarding the auditable documenting of the direct delivery of other substances envisaged for co-treatment,
3. shall conduct an assessment of the use of the additives used in waste water treatment and the substances envisaged for co-treatment regarding their pollutant contents and, as and when required, specify the use of more suitable additives to the sewage sludge producer,
4. shall place the sewage sludge producer under an obligation regarding the establishment and application of a control and rejection mechanism for direct deliveries of other substances envisaged for co-treatment as per point 2,
5. shall place the sewage sludge producer under an obligation to brief the competent authority regarding foreseeable changes in the composition of the waste water in the catchment area of the waste water treatment plant,

6. shall obligate the mixture manufacturer and compost producer to use a sewage sludge as a base material in the production of mixture and compost which has undergone quality assurance as defined by this Ordinance, and
7. shall obligate the mixture manufacturer and compost producer to document the materials designated for mixture and compost production as per Appendix 2 Tables 7 and 8 of the Fertiliser Ordinance in such a way that they can be checked.

The quality assurance agency shall monitor implementation of the plan by the sewage sludge producer, the mixture manufacturer and the compost producer. It shall appoint an expert as per § 22 to review compliance with the requirements under sentence 2 points 1 and 3.

(2) As regards the ongoing monitoring of the quality mark owner within the meaning of § 12(3) point 3 of the Waste Recovery and Recycling Act, the quality assurance agency shall draw up an individual plan for every quality mark owner for scrutinising the contents of the sewage sludge, the sewage sludge mixture and the sewage sludge compost belonging to the quality mark owner and shall obligate the quality mark owner to implement the investigation plan as per § 32.

(3) The quality assurance agency shall lay down the technical framework for the professional application of the sewage sludge, sewage sludge mixture or sewage sludge compost. In this regard, specific stipulations shall be determined in accordance with the code of good practice on reducing water and soil pollution, reducing epidemic hygiene and phytohygienic risks and regarding the calculation of the dosage rate. The quality mark owner shall ensure implementation of these stipulations. Prior to application or incorporation of the sewage sludge, sewage sludge mixture or sewage sludge compost, the quality mark owner shall document the recommendations for application under sentence 1 and hand a copy of the recommendations over to the party utilising the sewage sludge.

(4) The quality assurance agency shall set out the minimum requirements as per §§ 20 to 31 in a by-law, a monitoring agreement or another rule which is binding on the quality mark owner.

(5) The quality assurance agency shall notify the competent authority of the following within four weeks:

1. the appointment of experts, their fields of activity, changes to their fields of activity and the expiry of an expert's appointment,
2. any changes in the organisational structure of the quality assurance agency, and
3. the dissolution of the quality assurance agency.

(6) The quality assurance agency shall maintain an up-to-date register of the quality mark owners who are entitled to bear its quality mark. The quality assurance agency shall make the register available to the general public in an appropriate manner.

## **§ 22**

### **Experts**

(1) Experts as per § 12(6) of the Waste Recovery and Recycling Act have the reliability, impartiality and professional competence needed to carry out their tasks as defined by this Ordinance provided they fulfil the requirements mentioned in §§ 5 to 7 of the Environmental Audit Act in the version published on 4 September 2002 (Federal Law Gazette I p. 3490), last amended by Article 3 of the Act of 25 November 2015 (Federal Law Gazette I p. 2092), in its current version. The quality assurance agency shall present to the authority responsible for approval of the quality assurance agency evidence of each expert's suitability and professional competence prior to him starting his work.

(2) Each expert is obligated to keep an inspection log that indicates the type, scope and results of all the inspections conducted. The expert must present the inspection log to the quality assurance agency on request. The quality assurance agency must present the inspection log to the competent authority on request.

## **§ 23**

### **Independent committee within the quality assurance agency**

(1) The independent committee within the quality assurance agency is made up as follows:

1. predominantly of representatives who are not quality mark owners,
2. of representatives from the field of waste water treatment and sewage sludge utilisation as well as from the field of qualified agricultural and landscaping establishments, and
3. of representatives of establishments and institutions who are employed in the fields of research, analytics and utilisation of sewage sludge, as well as in the consultancy regarding sewage sludge utilisation.

(2) The independent committee shall

1. evaluate the application for issuing the quality mark as per § 27(1),
2. evaluate the results of the monitoring measures carried out as part of the process for issuing the quality mark in accordance with § 28,
3. evaluate the results of the internal and independent quality control inspections according to the provisions under § 30, and

4. in the case of the improper bearing of the quality mark by the quality mark owner, offer advice regarding the taking of measures as per § 20(2) point 7 and submit a proposal for a decision to the quality assurance agency.

(3) The members of the committee are not bound by instructions when it comes to making their decisions. Members about whom there are concerns regarding bias may not participate in the decision-making process. Members of the committee are required to keep confidential all information with which they become acquainted during their work.

(4) The procedure whereby a member is excluded shall be laid down in a by-law, a monitoring agreement or another binding rule.

## **§ 24**

### **Official monitoring of the quality assurance agency**

(1) The authority responsible under § 20(1) for the approval of a quality assurance agency shall examine, at intervals not exceeding five years, whether the approved quality assurance agency continues to satisfy the preconditions governing approval.

(2) The quality assurance agency shall report to the competent authority, of its own accord, in relation to each calendar year by 31 March of each following year regarding the monitoring of the quality mark owners carried out during the calendar year as well as regarding the issuance and withdrawal of quality marks. The report shall also include an up-to-date register of the quality mark owners in accordance with § 21(6) sentence 1. The competent authority may shorten the deadline for submitting the report.

## **§ 25**

### **Revocation of the approval; dissolution of the quality assurance agency**

(1) § 49 of the Act on administrative procedures notwithstanding, the approval of a quality assurance agency may be revoked if the latter fails to fulfil, or fails to fulfil properly, one of the requirements under § 20(2) or repeatedly fails to fulfil, or fails to fulfil properly, one or more obligations under § 21.

(2) Approval shall expire with the dissolution of the quality assurance agency or the decision to initiate insolvency proceedings. In the event of the initiation of insolvency proceedings, the competent authority may again approve the quality assurance agency, on request, for a limited period.

(3) If the approval of a quality assurance agency has lapsed, the quality mark owner shall lose the entitlement to bear the quality mark of the quality assurance agency. By way of

derogation from sentence 1, the authority responsible for approval may authorise the quality mark owner to continue to bear the quality mark for an appropriate transitional period.

## **Section 2**

### **Quality mark owner**

#### **§ 26**

#### **Requirements in terms of the reliability, professional competence and expertise of the quality mark owner**

(1) The reliability and professional competence required in accordance with § 12(3) point 1 of the Waste Recovery and Recycling Act is a given if the persons responsible for the management and supervision of the quality mark owner's plant satisfy the requirements in terms of reliability and professional competence as per § 9 of the Ordinance on specialised waste disposal companies of 10 September 1996 (Federal Law Gazette I p. 1421), last amended by Article 2 of the Ordinance of 5 December 2013 (Federal Law Gazette I p. 4043), in its current version.

(2) The expertise required under § 12(3) point 1 of the Waste Recovery and Recycling Act is a given if the other staff fulfil the requirements in terms of expertise according to § 10 of the Ordinance on specialised waste disposal companies.

#### **§ 27**

#### **Application for the quality mark**

(1) The application for a quality mark must be made to a quality assurance agency in writing. The following auditable documents must be enclosed with the application:

1. proof concerning reliability and professional competence as per § 26(1),
2. proof concerning expertise as per § 26(2),
3. information on the location and nature of the production site, including the equipment,
4. a description of the waste water treatment process employed by the waste water treatment plant whose sewage sludge is to be delivered as part of routine quality assurance,
5. in the case of the production of a sewage sludge mixture or compost, a description of the treatment process employed at the plant for producing a sewage sludge mixture or compost,

6. information regarding the type and quantity of the additives used quarterly for waste water treatment in the waste water treatment plant and the substances envisaged for co-treatment,
7. information regarding the quantity of sewage sludge delivered annually in total for disposal and information regarding the nature of previous disposal, and
8. a plan for stipulating recommendations concerning the professional application of sewage sludge, sewage sludge mixtures and sewage sludge compost as per § 21(3) sentences 1 and 2 and an example of a recommendation for use pursuant to § 21(3) sentence 4.

(2) If the application is made by a natural person, legal entity or by an association of individuals who or which is not a sewage sludge producer, compost producer or mixture manufacturer, this individual or entity must present in writing a statement from the sewage sludge producer, compost producer or mixture manufacturer which assures him/it unlimited access to all technical facilities and to the data as well as the permit concerning full scrutiny of the facilities and data required to implement routine quality assurance.

(3) Following receipt of the application, the quality assurance agency shall review the application for completeness. If the application is complete, the quality assurance agency shall issue the applicant with an acknowledgement of receipt as soon as the application is received. In the acknowledgement of receipt, the date of receipt must be disclosed and reference made to the fact that henceforth, monitoring of the applicant to be carried out on a one-off basis shall begin prior to the issuing of the quality mark and monitoring shall extend over a period of at least six months. The review of the application to issue a quality mark must be concluded within three months of the cessation of monitoring according to sentence 3. § 42a(2) sentences 3 and 4 of the Act on administrative procedures shall apply.

(4) The quality assurance agency must present the application for the quality mark along with the proof as per § 28 to the independent committee for assessment in accordance with § 23(2) points 1 and 2.

## **§ 28**

### **Proof of fulfilment of the requirements in terms of routine quality assurance**

(1) Proof of fulfilment of the requirements in terms of quality assurance that is required for the issuance of the quality mark under § 12(3) point 2 of the Waste Recovery and Recycling Act presupposes that, prior to the application,

1. at least three sewage sludge investigations into the heavy metal content and the sum total of organic halogen compounds in the form of adsorbed organically bound halogens,

evenly distributed over a period of six months, were carried out in accordance with § 5(1) sentence 1 and

2. at least once over a six-month period, a single investigation of the content of the following organic pollutants was carried out on the sewage sludge as per § 5(2) sentence 1:
  - a) polychlorinated biphenyls,
  - b) polychlorinated dibenzodioxins and dibenzofurans, including dioxin-like polychlorinated biphenyls,
  - c) benzo(a)pyrene, and
  - d) perfluorinated compounds containing the individual substances perfluorooctanoic acid and perfluorooctane sulfonic acid.

The applicant shall arrange for the sewage sludge investigations to be carried out in accordance with the provisions under § 32.

(2) The proof as per paragraph 1 must include, moreover, auditable documentation concerning

1. the results of the sewage sludge investigations of heavy metal content and the sum total of organic halogen compounds, specified as adsorbed organically bound halogens which have taken place over a period of three years prior to the application, in accordance with § 5(1) sentence 1, and the results of the organic pollutants polychlorinated biphenyls and polychlorinated dibenzodioxins, including dioxin-like polychlorinated biphenyls, as per § 5(2) sentence 1. As regards the parameters for polychlorinated biphenyls and polychlorinated dibenzodioxins and dibenzofurans, the results of at least two investigations carried out during this period must be documented, and the interval between the two investigations must be at least 18 months,
2. the additives used in waste water and sewage sludge treatment, as well as the direct delivery of other substances envisaged for co-treatment,
3. the establishment and application of a control and rejection mechanism for direct deliveries of other substances envisaged for co-treatment as per point 2,
4. the measures carried out and the results of independent monitoring by the sewage sludge producer.

The limit values under § 8(1) shall apply to the sewage sludge investigated in accordance with sentence 1 point 1.

(3) In the case of the utilisation of a sewage sludge mixture or a sewage sludge compost, the requirements under paragraphs 1 and 2 shall apply to the sewage sludge envisaged for

the production of the sewage sludge mixture or compost, while the requirements under paragraph 1 and paragraph 2 point 4 shall apply accordingly to the sewage sludge mixture and sewage sludge compost produced. Moreover, the proof must include auditable documenting of the other materials used in the production of the sewage sludge mixture or compost in accordance with Appendix 2 Tables 7 and 8 of the Fertiliser Ordinance. The limit values under § 8(2) shall apply to the manufactured sewage sludge mixture and the sewage sludge compost produced.

(4) The quality assurance agency must ensure that the results of the investigation as per paragraph 1 are forwarded to it directly by the investigative body as per § 33. The limit values under § 8(1) shall apply to the sewage sludge investigated. The quality assurance agency shall review the investigations as per paragraph 1 and paragraph 2 point 1 and document the test results.

(5) The quality assurance agency shall commission an expert to review compliance with the requirements under paragraph 2 points 2 to 4 and document the test results.

### **Section 3**

#### **Ongoing monitoring following issuance of the quality mark**

##### **§ 29**

##### **Ongoing monitoring**

(1) Ongoing monitoring as per § 12(3) point 3 of the Waste Recovery and Recycling Act comprises internal and independent quality control inspections as per § 30.

(2) At least once a year, the quality assurance agency shall issue a test certificate to the quality mark owner as proof of routine quality assurance within the framework of ongoing monitoring.

##### **§ 30**

##### **Requirements in terms of internal and independent quality control inspections as part of ongoing monitoring**

(1) The quality mark owner shall perform the internal quality control inspection. The following measures must be ensured as a result of the internal quality control inspection:

1. if the quality mark owner is a sewage sludge producer, implementation of the measures referred to in § 21(1) points 2, 4 and 5,
2. if the quality mark owner is a mixture manufacturer or compost producer, implementation of the measures referred to in § 21(1) points 6 and 7, and

3. implementation of the measures referred to in § 21(3).

(2) The quality mark owner shall maintain an overview which must include the following information:

1. the parties utilising the sewage sludge supplied,
2. the soils onto and into which the quality assured sewage sludge, sewage sludge mixture or sewage sludge compost was applied or incorporated, together with an indication of the district, field, plot number and size of the area of application or incorporation in hectares,
3. the quantity of sewage sludge, sewage sludge mixture or sewage sludge compost which was applied onto, or incorporated into, soils as per point 2, each time in tonnes of fresh matter and tonnes of dry matter, and
4. the technique used to apply and incorporate sewage sludge, sewage sludge mixtures and sewage sludge compost.

In deviation from sentence 1 point 2, the authority responsible for the area of application or incorporation may, on request, in the case of utilisation on or in soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, also approve the submission of alternative proofs of conformity with zoning regulations if, in so doing, the area of application or incorporation is covered with comparable accuracy.

(3) The quality mark owner shall furnish proof of the monitoring measures carried out in auditable documentation.

(4) The independent quality control inspection includes

1. performance of the investigations stipulated in the investigation plan as per § 21(2) and
2. the review to be carried out on a regular basis at intervals not exceeding three years to monitor fulfilment of the requirements in terms of the internal quality control inspection as per paragraph 1 in particular.

The quality assurance agency must ensure that fulfilment of the requirements under sentence 1 point 2 is reviewed by an expert as per § 22(1).

(5) The quality assurance agency must ensure that the following documents are forwarded to it directly:

1. the results of the investigations into the sewage sludge as per paragraph 4 sentence 1 point 1, by the investigative body as per § 33, and
2. the results of the independent quality control inspection as per paragraph 4 sentence 1 point 2 by the expert as per § 22(1).

(6) The quality assurance agency must check the results of the internal quality control inspection as per paragraph 1 and of the independent quality control inspection as per paragraph 4 and present them to the independent committee for assessment in accordance with § 23(2) point 3. The assessment of the monitoring results shall be documented by the quality assurance agency every six months and communicated to the quality mark owner. The documentation shall also consider defaults, irregularities and shortcomings identified along with measures as per § 20(2) point 7.

### **§ 31**

#### **Deviating provisions as regards delivery of quality-assured sewage sludge, sewage sludge mixture or sewage sludge compost**

(1) The following applies in connection with the delivery of a quality-assured sewage sludge, sewage sludge mixture or sewage sludge compost:

1. In deviation from § 4(1), the determination of the soil texture and the soil investigation are not necessary as regards the application or incorporation of sewage sludge, a sewage sludge mixture or sewage sludge compost;
2. in deviation from § 4(4), repeat soil investigations are not required;
3. in deviation from § 5(1) sentences 2 and 3, however, for every 500 tonnes of dry matter or part thereof, the investigation of the sewage sludge must be carried out no more than every two months;
4. in deviation from § 5(2) sentence 2, the sewage sludge, sewage sludge mixture or sewage sludge compost shall be examined at intervals of no more than three years;
5. in deviation from § 5(3), the investigation of the sewage sludge mixture or sewage sludge compost shall be carried out for every 1 000 tonnes of dry matter or part thereof;
6. the authority responsible at the site of the waste water treatment plant may, on request, in the case of utilisation on or in soil used for agricultural purposes, and in consultation with the competent specialist agricultural authority, approve the extension of the deadline for submitting the results of the investigation as per § 5(4) or issue an exemption from the obligation to submit the results of the investigation in accordance with § 5(4);
7. in deviation from § 15(3), a blending of sewage sludges from waste water treatment plants of different sewage sludge producers is permitted if
  - a) the waste water treatment plants are situated within the area of jurisdiction of an authority responsible for enforcement of the Ordinance,

- b) the composition of the waste water treated in the waste water treatment plants is similar,
  - c) a binding rule exists between the sewage sludge producers concerning the continued use of their sewage sludges; a copy of the rule must be presented to the competent authority at its request, and
  - d) the limit values as per § 8 are observed;
8. in deviation from § 16(2), the notification of the intended application or incorporation of a sewage sludge, sewage sludge mixture or sewage sludge compost is not required if the quality mark owner has disclosed to the authority responsible for the application or incorporation areas the soils designated for application or incorporation during the current calendar year, with an indication of the district, field, plot number and size of the area of application or incorporation in hectares, and the area of application or incorporation designated for upcoming application or incorporation is part of this communication.

(2) By way of derogation from paragraph 1 point 8, the authority responsible for the area of application or incorporation may, on request, in the case of utilisation on or in soil used for agricultural purposes, and in consultation with the competent specialist agricultural authority, also approve the submission of alternative proofs of conformity with zoning regulations if, in so doing, the area of application or incorporation is covered with comparable accuracy.

(3) Paragraph 1 shall only apply if the quality mark owner has furnished proof to the competent authority of the entitlement to bear the quality mark and has submitted the test certificate of the quality assurance agency as proof of routine quality assurance in accordance with § 29(2).

(4) The quality assurance agency may, in a given case, make the application of paragraph 1 dependent on conditions, for a limited period or make it subject to requirements.

(5) In the case of the application or incorporation of sewage sludge, sewage sludge mixtures or sewage sludge compost onto or into soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, the competent authority may, on request, exempt sewage sludge producers, mixture manufacturers and compost producers from the obligation to prepare and provide the delivery note as per § 17 or § 18. A prerequisite for this is that application or incorporation should involve a soil which lies within the area of jurisdiction of the competent authority at the main office of the waste water treatment plant. In the event that an exemption as per sentence 1 is issued, the sewage sludge producer, mixture manufacturer or compost producer shall present to the competent authority (in the case of application or incorporation onto or into soil used for agricultural

purposes, to the competent specialist agricultural authority as well), by 15 February of the following year at the latest, proofs regarding the application and incorporation operations undertaken in the preceding calendar year. The proofs must contain the following information:

1. The name and address of the sewage sludge producer, the mixture manufacturer and the compost producer,
2. the name and address of the carrier,
3. the name and address of the user,
4. the quantity delivered in tonnes of dry matter,
5. the date of delivery and the date of application or incorporation,
6. the description of the soils onto or into which the quality-assured sewage sludge, sewage sludge mixture or sewage sludge compost was applied or incorporated, together with an indication of the district, field, plot number and size of the area of application or incorporation in hectares.

(6) If an exemption as per paragraph 5 sentence 1 is applied for by a quality mark owner that is not a sewage sludge producer, compost producer or mixture manufacturer, at the time of the application, the sewage sludge producer, mixture manufacturer or compost producer must present a statement in which they pledge their cooperation when furnishing the proofs in accordance with paragraph 5 sentences 3 and 4. The proofs pursuant to paragraph 5 sentences 3 and 4 must be submitted by the quality mark owner.

## **Part 4**

### **Common provisions concerning sample investigation and the keeping of records**

#### **§ 32**

#### **Sample investigation**

(1) Sample investigation includes sampling, sample preparation and sample analyses in relation to all investigations of soil, sewage sludge, sewage sludge mixtures and sewage sludge compost that are required under this Ordinance. The party obligated to undertake sample investigation must commission an independent and notified investigative body in accordance with § 33 to investigate samples.

(2) The sampling of soil designated for the application or incorporation of sewage sludge, sewage sludge mixtures or sewage sludge compost shall be carried out in accordance with Appendix 2 point 1.1; sample preparation and analysis shall be conducted in accordance with Appendix 2 points 1.2 and 1.3.

(3) The sampling of sewage sludge, sewage sludge mixture or sewage sludge compost scheduled for delivery shall be carried out as per Appendix 2 point 2.1 while preparation of the samples shall be conducted in accordance with Appendix 2 point 2.2 and sample analysis according to one of the methods of investigation listed in Appendix 2 point 2.3.

(4) The investigation of a sewage sludge, sewage sludge mixture or sewage sludge compost in terms of the parameters mentioned in § 5(1) carried out in accordance with the provisions of the Fertiliser Sampling and Analysis Ordinance in the version published on 27 July 2006 (Federal Law Gazette I p. 1822), as amended by Article 3 of the Ordinance of 6 February 2009 (Federal Law Gazette I p. 153), is recognised as being equivalent to the methods of investigation referred to in paragraph 3.

(5) The party responsible for investigation must keep the results of the investigation for ten years. He/it shall present these to the competent authority on request.

### **§ 33**

#### **Independent investigative bodies**

(1) An investigative body requires notification in accordance with this regulation.

(2) An investigative body must be notified on request if it has demonstrated that it satisfies the requirements according to the subject module on waste under the administrative agreement regarding proof of competence and the notification of test laboratories and measuring stations (investigative bodies) in the environmental field regulated under waste law of 30 October 2002 (Federal Gazette p. 25450). Notification is effected by the competent authority in the Federal State in which the applicant has its head office and shall apply all over Germany. If the applicant does not have its head office in Germany, the authority of the Federal State in which the investigation work is primarily to be carried out shall have responsibility.

(3) The notification may be subject to revocation or a time limitation or be issued in connection with conditions and requirements or subject to certain requirements. The competent authority may demand from an investigative body which is active nationwide that it presents a valid accreditation regarding fulfilment of the requirements under DIN EN ISO/IEC 17025, publication date: August 2005, which can be obtained from Beuth-Verlag GmbH, Berlin, and is securely archived at the German National Library. The accreditation must relate to the parameters and investigative procedures under Appendix 2. Notification procedures under this regulation may be handled by a single body. The review of the application for notification of a body must be concluded within three months. § 42a(2) sentences 2 to 4 of the Act on administrative procedures applies.

(4) Notifications from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area shall be deemed equivalent to notifications pursuant to paragraph 2 sentence 1 if they are on a par with them. When reviewing the application for notification under paragraph 2 sentence 1, evidence from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area shall be deemed equivalent to evidence provided in Germany if this evidence shows that the investigative body meets the relevant requirements under paragraph 2 sentence 1 or satisfies requirements of the issuing state that are largely comparable in terms of their objective. Evidence concerning notifications within the meaning of sentence 1 or other evidence pursuant to sentence 2 must be submitted to the competent authority in the original or as copies thereof before the investigation work starts. A certified true copy and certified German translation may be required.

## **§ 34**

### **Record keeping**

(1) The sewage sludge producer shall keep a record in relation to the respective calendar year which must contain the following information:

1. the results of the soil investigations carried out in accordance with § 4(1), with a precise description of the soils onto or into which the sewage sludge, sewage sludge mixture or sewage sludge compost was applied or incorporated,
2. the quantity of sewage sludge in tonnes of dry matter which is generated in total in a waste water treatment plant,
3. the quantity of sewage sludge in tonnes of dry matter which, in accordance with Parts 2 and 3 of this Ordinance, was applied onto or incorporated into soils used for agricultural purposes for the purpose of utilisation, indicated as
  - a) the quantity of sewage sludge, minus the quantity of sewage sludge used in sewage sludge mixtures and composts as per letters b and c,
  - b) the quantity of sewage sludge mixtures, with an indication of the quantity of sewage sludge used to produce the mixture, and
  - c) the quantity of sewage sludge composts, with an indication of the quantity of sewage sludge used to produce the compost,
4. the quantity of sewage sludge in tonnes of dry matter which, in accordance with Parts 2 and 3 of this Ordinance, was applied onto or incorporated into soils in connection with landscaping measures for the purpose of utilisation, indicated as

- a) the quantity of sewage sludge, minus the quantity of sewage sludge used in sewage sludge mixtures and composts as per letters b and c,
  - b) the quantity of sewage sludge mixtures, with an indication of the quantity of sewage sludge used to produce the mixture, and
  - c) the quantity of sewage sludge composts, with an indication of the quantity of sewage sludge used to produce the compost,
5. the quantity of sewage sludge in tonnes of dry matter which was subject to quality assurance in accordance with Part 3 of this Ordinance,
  6. the properties of the sewage sludges as per § 5(1) and (2),
  7. the type of treatment which the sewage sludges, sewage sludge mixtures or sewage sludge composts in tonnes of dry matter applied or incorporated onto or into soils used for agricultural purposes, as well as onto or into soils in connection with landscaping measures, have undergone,
  8. the names and addresses of the parties utilising the sewage sludge, the mixture manufacturers and the compost producers.

(2) Those sewage sludge producers who operate waste water treatment plants with an approved design capacity of less than 1,000 population equivalents are exempt from the obligations under paragraph 1 point 8.

(3) The sewage sludge producer shall forward electronically to the authority responsible for the area of application or incorporation the information under paragraph 1 points 1 to 7 relating to the previous calendar year by 15 March of the following year. The competent authority shall forward electronically to the supreme Federal State authority responsible the information relating to the previous calendar year under paragraph 1 points 2 to 7 and concerning the entire area of application or incorporation, to be specified in hectares and indicating the Federal State in which application or incorporation took place, by 31 May of the following year. The supreme Federal State authority shall forward electronically to the Federal Office for Statistics the summarised data relating to the previous calendar year by 15 July of the following year at the latest. The Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety shall draw up a summary report every three years on the basis of the data collected by the Federal Office for Statistics and forward this to the European Commission, the next occasion being by 30 September 2019.

(4) The provisions of the Ordinance on waste recovery and disposal records of 20 October 2006 (Federal Law Gazette I p. 2298), last amended by Article 97 of the Ordinance of 31 August 2015 (Federal Law Gazette I p. 1474), in its currently valid version, shall not apply to the utilisation of sewage sludge to which the provisions of this Ordinance apply; exempt

from this are § 2(1) point 2 and § 23 point 2 of the Ordinance on waste recovery and disposal records.

## **§ 35**

### **Application or incorporation schedule**

On an annual basis, the competent authority shall draw up an application and incorporation schedule concerning the sewage sludge applied or incorporated over the course of the calendar year, the sewage sludge mixture applied or incorporated over the course of the calendar year and the sewage sludge compost applied or incorporated over the course of the calendar year. When drawing up the application and incorporation schedule, the possibilities of electronic data processing are to be utilised.

## **Part 5**

### **Concluding provisions**

## **§ 36**

### **Regulatory offences**

*[Provisions shall be inserted at a later stage in proceedings. The legal basis for regulations concerning administrative fines is § 69(1) point 8 and paragraph 2 point 15 of the Waste Recovery and Recycling Act; the framework of fines follows from § 69(3) of the Waste Recovery and Recycling Act]*

(1) A breach of the regulations within the meaning of § 69(1) point 8 of the Waste Recovery and Recycling Act is committed by anyone who wilfully or negligently

[...]

(2) A breach of the regulations within the meaning of § 69(2) point 15 of the Waste Recovery and Recycling Act is committed by anyone who wilfully or negligently

[...]

## **§ 37**

### **Quality marks already issued**

(1) A sewage sludge producer, a mixture manufacturer, a compost producer or another natural person or legal entity or association of individuals who or which was entitled, as of ... [insert date of the day prior to the entry into force of this Ordinance in accordance with Article 8(1)], to bear the quality mark of a current quality assurance agency shall be regarded as a quality mark owner within the meaning of this Ordinance until ... [insert date of the day three years after the entry into force of this Ordinance in accordance with Article

8(1)], as long as the requirements as per § 27(1) and (2) are satisfied and the current quality assurance agency monitors compliance with said requirements.

(2) If the owner of a quality mark awarded prior to the expiry of the deadline under paragraph 1 has already satisfied the requirements for issuing the quality mark in accordance with §§ 26 to 30 and furnished evidence of this, the evidence can be recognised when applying for a quality mark to be issued in accordance with § 27.

### **§ 38**

#### **Using the available investigation results**

(1) By way of derogation from § 4(1) sentence 1 point 2, results of investigations which were carried out prior to ... [insert: the date of entry into force in accordance with Article 8(1)] may be used provided these results are not more than ten years old.

(2) By way of derogation from § 5(2) sentence 1, results of investigations which were carried out prior to ... [insert: the date of entry into force in accordance with Article 8(1)] may be used provided these results are not more than two years old.

(3) By way of derogation from § 28(2) sentence 1 point 1, results of investigations into the content of the organic pollutants polychlorinated biphenyls and polychlorinated dibenzodioxins which were carried out prior to ... [insert: the date of the entry into force of Article 1 of the Ordinance] on the basis of § 3(6) of the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by Article 74 of the Ordinance of 31 August 2015 (Federal Law Gazette I p. 1474), may be used for auditable documenting. The results may only be used provided the limit values as per § 8(1) are not exceeded.

### **§ 39**

#### **Existing investigative bodies**

A body which has been appointed as an investigative body in accordance with § 3(11) sentence 1 of the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by Article 74 of the Ordinance of 31 August 2015 (Federal Law Gazette I p. 1474), shall continue to be regarded as an independent investigative body in accordance with § 33(2) sentence 1. If § 33 contains requirements which go beyond the requirements of previous provisions under Federal State law, these requirements must be satisfied as of ... [insert: the first day of the sixth month following the month of promulgation]. If the stipulation under sentence 1 was for a limited period and this time limitation ends prior to ... [insert: the first day of the sixth month following the month of promulgation], then it shall continue to be a valid notification within the meaning of § 33 until ... [insert: the first day of the sixth month following the month of promulgation].

**Appendix 1**

(re § 8(1))

**Additional limit values for pollutants contained in the sewage sludge, sewage sludge mixture and sewage sludge compost**

In addition to the limit values under Appendix 2 Table 1.4 column 4 of the Fertiliser Ordinance and the maximum copper content as per Appendix 1 Section 4.1 point 4.1.1 column 6 paragraph 2 of the Fertiliser Ordinance, the following additional limit values must be observed in accordance with § 8(1) sentence 1 of the Sewage Sludge Ordinance:

No.	Substance name	Limit value (in milligrammes per kilogramme of sewage sludge dry matter)
1	Zinc	4,000
2	Sum total of the organic halogen compounds in the form of adsorbed organically bound halogens (AOX)	400
3	Benzo(a)pyrene (B(a)P)	1
4	Polychlorinated biphenyls (PCB), each time in relation to the congeners points 28, 52, 101, 138, 153, 180	0.1

## **Sample investigation**

### **1. Soil samples**

#### **1.1 Sampling**

The period following the harvest until the time of the next application of sewage sludge shall be chosen for soil sampling.

With a plot size of up to 1 hectare, at least one composite sample shall be taken from each plot uniformly cultivated soil, e.g. field. On areas of up to 10 hectares with roughly uniform soil quality and standardised farming operations, one composite sample in keeping with the sampling depths is generally to be taken for every hectare, but from at least three sections. In the case of areas of less than 5,000 m<sup>2</sup>, division can be dispensed with. However, for areas in excess of 10 hectares, at least 10 sections should be sampled.

Sampling shall take place in accordance with the rules for sampling soils used for agricultural purposes in accordance with DIN ISO 10381-1 "Soil quality - Sampling - Part 1: Guidance on the design of sampling programmes", publication date: August 2003, DIN ISO 10381-4 "Soil quality - Sampling - Part 4: Guidance on the procedure for investigation of natural, near-natural and cultivated sites", publication date: April 2004. For a composite sample, samples are to be taken as far as the working depth with 15 to 25 individual cuts per section each time. The cuts must be distributed evenly over the area.

As regards the suitability of devices for sampling, DIN ISO 10381-2 "Soil quality - Sampling - Part 2: Guidance on sampling techniques", publication date: August 2003, is decisive. As regards the choice of sample containers and preservation, transport and storage of the samples, DIN ISO 10381-1 "Soil quality - Sampling - Part 1: Guidance on the design of sampling programmes", publication date: August 2003, must be observed. The transporting of the soil samples for examining the organic pollutant content, along with the storage of these samples, is undertaken in accordance with DIN 19747 "Investigation of solids - Pre-treatment, preparation and processing of samples for chemical, biological and physical investigations", publication date: July 2009.

## 1.2 Sample preparation

Sample preparation, including the drying of the sample material, shall be performed in accordance with DIN 19747 "Investigation of solids - Pre-treatment, preparation and processing of samples for chemical, biological and physical investigations", publication date: July 2009. The composite samples are divided into a coarse portion and a fine portion by sifting using a sieve with a mesh size of 2mm. The fine portion must be specifically homogenised and crushed and examined for the purposes of the investigation. If there are indications of increased pollutant content in the fraction exceeding 2mm, this fraction must also be examined following preliminary crushing and homogenisation.

## 1.3 Sample analysis

The pH, of cadmium, chromium, copper, nickel, lead, zinc, mercury, polychlorinated biphenyls and benzo(a)pyrene in soils and soil material shall be determined in accordance with the methods of analysis cited in Table 1.

In the course of this, the provisions under point 2.3 must be observed with regard to averaging and the limits of detection and determination.

Equivalent methods of analysis in accordance with the state of the art are permitted with the consent of the competent authority. If other parameters not mentioned in Table 1 have to be examined, the competent authority shall set out the method of analysis.

Proof that the analyses required have been carried out properly shall be furnished by the investigative body which is commissioned by the sewage sludge producer, mixture manufacturer or compost producer and presented by the sewage sludge producer, mixture manufacturer or compost producer.

The pollutant contents shall relate to dry matter obtained at 105 degrees Celsius. They must be specified in the same unit as the corresponding examination, action and precautionary values in Appendix 1.

**Table 1: Methods for analysing soils**

Parameter	Method(s) of analysis
pH value (CaCl <sub>2</sub> )	DIN ISO 10390 Determination of pH, publication date: December 2005
pH value	DIN EN 15933 Determination of pH, publication date: November 2012
Determination of dry mass	DIN ISO 11465 Determination of dry matter and water content on a mass basis, publication date: December 1996
Cadmium, chromium, copper, nickel, lead, zinc	DIN ISO 11047 Determination of cadmium, chromium, cobalt, copper, lead,

	manganese, nickel and zinc in aqua regia extracts of soil - Flame and electrothermal atomic absorption spectrometric methods, publication date: May 2003
Cadmium, chromium, copper, nickel, lead, zinc	DIN ISO 22036 Determination of trace elements in extracts of soil by inductively coupled plasma - atomic emission spectrometry (ICP-AES), publication date: June 2009  DIN EN ISO 17294-2 Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements, publication date: February 2005
Mercury (Hg)	DIN ISO 16772 Determination of mercury in aqua regia soil extracts with cold-vapour atomic spectrometry or cold-vapour atomic fluorescence spectrometry, publication date: June 2005  DIN EN 14183 Determination of mercury - Method using atomic absorption spectrometry, publication date: July 2007
Polychlorinated biphenyls (PCB) (PCB congeners 28, 52, 101, 138, 153, 180 according to Ballschmitter)	DIN ISO 10382 Determination of organochlorine pesticides and polychlorinated biphenyls - Gas chromatographic method with electron capture detection, publication date: May 2003  DIN EN 16167 Determination of polychlorinated biphenyls (PCB) by gas chromatography with mass selective detection (GC-MS) and gas chromatography with electron-capture detection (GC-ECD), publication date: November 2012
Benzo(a)pyrene (B(a)P)	DIN ISO 13877 Determination of polycyclic aromatic hydrocarbons - Method using high-performance liquid chromatography (HPLC), publication date: January 2000  DIN ISO 18287 Determination of polycyclic aromatic hydrocarbons (PAH) - Gas chromatographic method with mass spectrometric detection (GC-MS), publication date: May 2006

## 2. **Sewage sludge samples**

### 2.1 **Sampling**

Sewage sludge sampling shall be carried out in accordance with ISO 5667-13: 2011 "Water quality - Sampling - Part 13: Guidance on sampling of sludges", German version EN ISO 5667-13, publication date: August 2011. Samples shall be taken from a sewage sludge mixture and sewage sludge compost in accordance with DIN 19698-1 "Characterisation of solids - Sampling of solid and semi-solid materials - Part 1: Guidance for the segmental sampling of stockpiles of unknown composite", publication date: May 2014.

## **2.2 Sample preparation**

Sample preparation shall be carried out in accordance with DIN 19747 "Investigation of solids - Pre-treatment, preparation and processing of samples for chemical, biological and physical investigations", publication date: July 2009.

The sample to be analysed must be mixed immediately prior to taking a subsample. If there is a danger of mixture segregation, the subsample must be removed during mixing.

For every analysis parameter to be determined from the dry matter, one subsample shall be taken which is at least sufficient in order to be able to conduct four parallel analyses.

One of the samples to be analysed shall be lyophilised in such a way that evaporation losses are avoided in the case of the substances to be analysed. Particular attention must be paid to the fact that the sample does not thaw during lyophilisation.

## **2.3 Sample analysis**

When working with fresh and lyophilised samples, the standard safety rules for work in microbiological laboratories, especially in accordance with the Ordinance on safety and health protection in connection with activities involving biological agents (Ordinance on biological agents), must be observed. If applicable, a partial amount of the fresh or lyophilised sample can be sterilised for the relevant analyses (e.g. by heating the sample for 20 minutes at 121 degrees Celsius in the autoclave). It must be ensured, however, that sterilisation does not in any way affect the results of the analysis.

For each investigative parameter, at least two parallel analyses shall be carried out; the arithmetical mean of the two individual values shall be indicated as the result. Averaging is only permitted, however, if the difference between the two individual values does not exceed the repeatability that is usual for this method. In the event of such a transgression, the causes which underlie the excessive difference must be examined and a third analysis carried out. If the review does not yield any obvious causes, the mean of the three individual values (median) arranged according to size shall be indicated as the end result. In order to determine the values, DIN ISO 5725 "Accuracy (trueness and precision) of measurement methods and results" and the following parts must be observed in particular:

- DIN ISO 5725-1 "General principles and definitions", as amended, publication date: September 1998,
- DIN ISO 5725-2 "Basic method for the determination of repeatability and reproducibility of a standard measurement method", publication date: December 2002,

- DIN ISO 5725-3 "Intermediate measures of the precision of a standard measurement method", publication date: February 2003,
- DIN ISO 5725-4 "Basic methods for the determination of the trueness of a standard measurement method", publication date: January 2003,
- DIN ISO 5725-5 "Alternative methods for the determination of the precision of a standard measurement method", publication date: November 2002.

One of the methods of investigation listed in Table 2 shall apply in the determination of pH, dry residue, loss on ignition, nutrients, alkaline active constituents, heavy metals and organic pollutants. In so doing, the limit of determination of a selected analysis method must be less than the limit value of the corresponding parameter by at least a factor of three. The limits of detection and determination are determined in accordance with DIN 38402-60 "German standard methods for the examination of water, waste water and sludge - General information (group A) - Part 60: Analytical quality assurance for chemical and physicochemical water analysis (A 60)", publication date: December 2013.

Equivalent methods of analysis in accordance with the state of the art are permitted with the consent of the competent authority. Investigations as per § 32(4) are recognised as being equivalent and are also permitted without the consent of the competent authority. If other parameters not mentioned in Table 2 have to be analysed, the competent authority shall set out the method of analysis.

Proof that the analyses required have been carried out properly shall be furnished by the investigative body which is commissioned by the sewage sludge producer, mixture manufacturer or compost producer and presented by the sewage sludge producer, mixture manufacturer or compost producer.

In order to calculate the 2,3,7,8-TCDD toxicity equivalents (TEQ), the respective concentrations by mass are multiplied by the toxic equivalency factors from Table 3 and the products added together. When adding up, single substance concentrations below the analytical detection limit are disregarded; single substance concentrations which are above the detection limit but below the limit of determination shall be included in the addition at half the value of the limit of determination.

**Table 2: Methods for analysing sewage sludge, sewage sludge mixtures and sewage sludge compost**

Parameter	Method(s) of analysis
pH value	DIN EN 12176 Determination of pH-value, publication date: June 1998

Parameter	Method(s) of analysis
Dry residue	<p>DIN EN 15935</p> <p>Sludge, treated biowaste, soil and waste - Determination of loss on ignition, publication date: November 2012</p>
Loss on ignition (organic matter)	<p>DIN EN 12879</p> <p>Determination of the loss on ignition of dry mass, publication date: February 2001</p> <p>DIN EN 15933</p> <p>Sludge, treated biowaste and soil - Determination of pH; German version EN 15933, publication date: November 2012</p>
Total nitrogen	<p>DIN EN 13342</p> <p>Determination of Kjeldahl nitrogen, publication date: January 2001</p>
Alkaline active constituents	<p>Method 4.5.1 Vol. II.2 of the Handbook of agricultural testing and research methodology (book of methods)</p> <p>Determination of alkaline active constituents in slag lime, converter lime, lime fertiliser consisting of [...] as well as organic and organo-mineral fertilisers</p>
Extraction of arsenic, lead, cadmium, copper, nickel, phosphorus <sup>4</sup> , mercury, zinc	<p>DIN EN 13346</p> <p>Characterisation of sludges - Determination of trace elements and phosphorus - Aqua regia extraction methods, publication date: April 2001</p> <p>Extraction by procedure A</p>
Arsenic, lead, cadmium, iron, copper, nickel, thallium, zinc	<p>DIN ISO 11047</p> <p>Soil quality - Determination of cadmium, chromium, cobalt, copper, lead, manganese, nickel and zinc in aqua regia extracts of soil - Flame and electrothermal atomic absorption spectrometric methods, publication date: May 2003</p> <p>DIN EN ISO 11885</p> <p>Water quality - Determination of 33 elements by inductively coupled plasma optical emission spectrometry, publication date: September 2009</p> <p>DIN EN ISO 17294-2</p> <p>Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements, publication date: February 2005</p> <p>DIN 38406-26</p> <p>German standard methods for the examination of water, waste water and sludge - Cations (group E) - Part 26: Determination of thallium by atomic absorption spectrometry (AAS) using electrothermal atomisation (E 26), publication date: July 1997</p> <p>CEN/TS 16170</p> <p>Sludge, treated biowaste and soil - Determination of elements using inductively coupled plasma optical emission spectrometry</p>

Parameter	Method(s) of analysis
	<p>(ICP-OES); German version, publication date: 2012</p> <p>CEN/TS 16171 Sludge, treated biowaste and soil - Determination of elements using inductively coupled plasma mass spectrometry (ICP-MS); German version, publication date: 2012</p> <p>CEN/TS 16172 Sludge, treated biowaste and soil - Determination of elements using graphite furnace atomic absorption spectrometry (GF-AAS); German version, publication date: 2013</p>
Mercury	<p>DIN EN ISO 17852 Water quality - Determination of mercury - Method using atomic fluorescence spectrometry, publication date: April 2008</p> <p>CEN/TS 16175 Sludge, treated biowaste and soil - Determination of mercury - Part 2: Cold-vapour atomic fluorescence spectrometry (CV-AFS); German version, publication date: 2013</p>
Phosphorus (Conversion: Phosphorus (P) = 2.291 for phosphorus pentoxide (P <sub>2</sub> O <sub>5</sub> ))	<p>DIN EN ISO 6878 Water quality - Determination of phosphorus - Ammonium molybdate spectrometric method, publication date: September 2004</p> <p>DIN EN ISO 11885 Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry, publication date: September 2009</p> <p>DIN EN ISO 17294-2 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS) - Part 2: Determination of 62 elements, publication date: February 2005</p>
Adsorbed organically bound halogens (AOX)	<p>DIN 38414-18 German standard methods for the examination of water, waste water and sludge; sludge and sediments (group S); determination of adsorbed organically bound halogens (AOX) (S 18), publication date: November 1989</p>
Benzo(a)pyrene (B(a)P)	<p>DIN EN 15527 Characterisation of waste - Determination of polycyclic aromatic hydrocarbons (PAH) in waste using gas chromatography mass spectrometry (GC/MS), publication date: September 2008</p> <p>DIN ISO 18287 Soil quality - Determination of polycyclic aromatic hydrocarbons (PAH) - Gas chromatographic method with mass spectrometric detection (GC-MS), publication date: May 2006</p> <p>CEN/TS 16181 Sludge, treated biowaste and soil - Determination of polycyclic aromatic hydrocarbons (PAH) by gas chromatography (GC) and</p>

Parameter	Method(s) of analysis
	high performance liquid chromatography (HPLC); German version, publication date: 2013
Polychlorinated biphenyls (PCB)	DIN 38414-20 German standard methods for the examination of water, waste water and sludge - Sludge and sediments (group S) - Part 20: Determination of 6 polychlorinated biphenyls (PCB) (S 20), publication date: January 1996 EN 16167 Sludge, treated biowaste and soil - Determination of polychlorinated biphenyls (PCB) by gas chromatography with mass selective detection (GC-MS) and gas chromatography with electron-capture detection (GC-ECD); German version, publication date: 2012
Polychlorinated dibenzodioxins (PCDD) and dibenzofurans (PCDF) as well as dioxin-like polychlorinated biphenyls (dl-PCB)	DIN CEN/TS 16190; DIN SPEC 91267 Sludge, treated biowaste and soil - Determination of dioxins and furans and dioxin-like polychlorinated biphenyls by gas chromatography with high resolution mass selective detection (HR GC-MS), publication date: May 2012 CEN/TS 16190 Sludge, treated biowaste and soil - Determination of dioxins and furans and dioxin-like polychlorinated biphenyls by gas chromatography with high resolution mass selective detection (HR GC-MS); German version, publication date: 2012
Polyfluorinated compounds (PFC)	DIN 38414-14 German standard methods for the examination of water, waste water and sludge - Sludge and sediments (group S) - Part 14: Determination of selected polyfluorinated compounds (PFC) in sludge, compost and soil - Method using high performance liquid chromatography and mass spectrometric detection (HPLC-MS/MS) (S 14), publication date: August 2011

**Table 3: 2,3,7,8-TCDD toxic equivalency factors (TEF - WHO 2005)**

Congeners	TEF
2,3,7,8-Tetra-CDD	1.0
1,2,3,7,8-Penta-CDD	1.0
1,2,3,4,7,8-Hexa-CDD	0.1
1,2,3,6,7,8-Hexa-CDD	0.1
1,2,3,7,8,9-Hexa-CDD	0.1
1,2,3,4,6,7,8-Hepta-CDD	0.01
1,2,3,4,6,7,8,9-Octa-CDD	0.0003
2,3,7,8-Tetra-CDF	0.1
1,2,3,7,8-Penta-CDF	0.03
2,3,4,7,8-Penta-CDF	0.3
1,2,3,4,7,8-Hexa-CDF	0.1
1,2,3,6,7,8-Hexa-CDF	0.1
1,2,3,7,8,9-Hexa-CDF	0.1

2,3,4,6,7,8-Hexa-CDF	0.1
1,2,3,4,6,7,8-Hepta-CDF	0.01
1,2,3,4,7,8,9-Hepta-CDF	0.01
1,2,3,4,6,7,8,9-Octa-CDF	0.0003
3,3',4,4'-TCB (77)	0.0001
3,4,4',5-TCB (81)	0.0003
3,3',4,4',5-PeCB (126)	0.1
3,3',4,4',5,5-HxCB (169)	0.03
2,3,3',4,4'-PeCB (105)	0.00003
2,3,4,4',5-PeCB (114)	0.00003
2,3',4,4',5-PeCB (118)	0.00003
2',3,4,4',5-PeCB (123)	0.00003
2,3,3',4,4',5-HxCB (156)	0.00003
2,3,3',4,4',5'-HxCB (157)	0.00003
2,3',4,4',5'-HxCB (167)	0.00003
2,3,3',4,4',5,5'-HpCB (189)	0.00003

### 3. Accessibility of technical regulations

The regulations mentioned under points 1 and 2 are securely archived at the German National Library in Leipzig and may be obtained as follows:

- a) DIN standards via Beuth-Verlag GmbH, Berlin and Cologne,
- b) the Handbook of agricultural testing and research methodology (book of methods), Volume I – The investigation of soils and Volume II.2 – The investigation of secondary raw material fertilisers, growing media and soil additives, via VDLUFA-Verlag in Darmstadt.

**Notifications, delivery notes, confirmations**

**Section 1**

**Land-based sewage sludge utilisation**

**1. Notification regarding the envisaged delivery or the scheduled application or incorporation of sewage sludge**

in accordance with § 16(3) sentence 1 of the Sewage Sludge Ordinance

1.1 Sewage sludge producer (name, address; in the instance under § 31(1) point 7 of the Sewage Sludge Ordinance, also information pertaining to the remaining plant operators): .....

1.2 Information regarding the envisaged sewage sludge utilisation

On ....., from my waste water treatment plant (name and address of the production site):.....

(in the instance under § 31(1) point 7, also information pertaining to the remaining waste water treatment plants)

..... cubic metres / ... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter)

will be delivered,  will be applied/incorporated, for utilisation, namely on a soil surface

which is used for agricultural purposes  in connection with landscaping measures

in the district ....., field ....., plot number ....., size: ..... hectares (instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

1.3 Party utilising the sewage sludge and the mixture manufacturer or compost producer who will use the sewage sludge to produce a sewage sludge mixture or compost (name, address): .....

1.4 Soil-related data

Note: The following data under point 1.4 may be omitted if the sewage sludge is delivered to produce a sewage sludge mixture or compost.

1.4.1 Current land use: .....

1.4.2 Soil texture in the area of application or incorporation in accordance with § 4(1) sentence 1 point 1 of the Sewage Sludge Ordinance: .....

1.4.3 The body responsible for investigating the soil in the area of application or incorporation in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance: (name, address).....

1.4.4 Date of the investigation: ..... Analysis number: .....

1.4.5 Outcomes of the soil investigation as per § 4(1) sentence 1 point 2 and paragraphs 2 and 4 of the Sewage Sludge Ordinance

Soil with a pH value of ..... contains on average:

Pollutant content (mg/kg of dry matter)

Lead		Chromium		Nickel		Zinc	
Cadmium		Copper		Mercury			
Polychlorinated biphenyls (PCB)				Benzo(a)pyrene (BaP)			

Results for additionally investigated parameters in accordance with § 4(3) of the Sewage Sludge Ordinance:

- 1.4.6 A transgression of the permitted precautionary values for metals or organic substances as per § 7(1) sentence 1 of the Sewage Sludge Ordinance
- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil, which was approved by the competent authority pursuant to § 7(3) (proof must be enclosed).

1.5 Sewage sludge-related data

1.5.1 The body responsible for investigating the sewage sludge in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address): .....

1.5.2 Date of the investigation: ..... Analysis number: .....

1.5.3 Outcomes of the sewage sludge investigations as per § 5(1) and (2) and § 6(1) sentence 2 and paragraph 2 sentence 1 of the Sewage Sludge Ordinance:

pH value		Iron (mg/kg of dry matter)	
----------	--	----------------------------	--

Substance name	a) Nutrient content (as a % of fresh matter)	b) Nutrient content (as a % of dry matter)
Organic matter		
Total nitrogen (N)		
Phosphorus (total)		
Phosphate (P <sub>2</sub> O <sub>5</sub> )		
Alkaline active substances (Calcium oxide - CaO)		

Substance name	Pollutant content (mg/kg of dry matter)	
Arsenic (As)		
Lead (Pb)		
Cadmium (Cd)		
Copper (Cu)		
Nickel (Ni)		
Mercury (Hg)		
Thallium (TI)		
Zinc (Zn)		
Sum total of the organic halogen compounds (in the form of adsorbed organically bound halogens - AOX)		
Benzo(a)pyrene (B(a)P)		
Polychlorinated biphenyls (PCB) <sup>1)</sup> Congeners	28:	
	52:	
	101:	
	138:	
	153:	
	180:	

Polychlorinated dibenzodioxins and dibenzofurans (PCDD, PCDF) <sup>2)</sup> , including dioxin-like polychlorinated biphenyls (dl-PCB) – in ng of toxicity equivalents/kg of dry matter	
Polyfluorinated compounds (PFC - as the sum of the individual substances perfluorooctanoic acid [PFOA] and perfluorooctane sulfonic acid [PFOS])	

1.5.4 Results for additionally investigated parameters in accordance with § 5(5) of the Sewage Sludge Ordinance:

.....

1.5.5 A transgression of the permitted pollutant contents in accordance with § 8(1) of the Sewage Sludge Ordinance

- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.

1.5.6 Epidemic hygiene and phytohygienic quality of the manufactured sewage sludge mixture/compost in accordance with § 11 of the Sewage Sludge Ordinance:

The sewage sludge complies with the requirements in terms of epidemic hygiene and phytohygiene in accordance with § 5(1) to (3) of the Fertiliser Ordinance.

1.6 Routine quality assurance (if carried out in accordance with §§ 19 to 31 of the Sewage Sludge Ordinance)

1.6.1 Routine quality assurance agency (name, address):.....

1.6.2 The quality mark owner is

- the sewage sludge producer in accordance with point 1.1.
- any natural person or legal entity or association of individuals who or which treats or utilises the sewage sludge from the sewage sludge producer (name, address)

.....

1.6.3 The sewage sludge mixture or the sewage sludge compost fulfils the requirements in terms of routine quality assurance (proof of continuous quality assurance as per § 29(2) of the Sewage Sludge Ordinance must be enclosed).

I hereby confirm that the sewage sludge envisaged for utilisation complies with all the requirements laid down in the Sewage Sludge Ordinance in its currently valid version.

-----  
(date)

-----  
(signature of the sewage sludge producer)

**2. Delivery note relating to the delivery of sewage sludge**  
in accordance with § 17(1) sentence 1 of the Sewage Sludge Ordinance

**Note:** In the case of the production and utilisation of a sewage sludge mixture or compost, the delivery note as per Section 2 shall be used.

2.1 Delivery note number: ..... Delivery note date: .....

2.2 Sewage sludge producer (name, address; in the instance under § 31(1) point 7 of the Sewage Sludge Ordinance, also information pertaining to the remaining plant operators):.....

Location of the waste water treatment plant (name, address; in the instance under § 31(1) point 7, also information pertaining to the remaining waste water treatment plants):

.....

2.3 Party utilising the sewage sludge and the mixture manufacturer or compost producer who will use the sewage sludge to produce a sewage sludge mixture or compost (name, address): .....

2.4 Soil-related data

Note: The following data under point 2.4 may be omitted if the sewage sludge is delivered to produce a sewage sludge mixture or compost.

2.4.1 Current land use:.....

2.4.2 Soil texture in the area of application or incorporation in accordance with § 4(1) sentence 1 point 1 of the Sewage Sludge Ordinance:.....

2.4.3 The body responsible for investigating the soil in the area of application or incorporation in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address):  
.....

2.4.4 Date of the investigation: ..... Analysis number: .....

2.4.5 Outcomes of the soil investigation as per § 4(1) sentence 1 point 2 and paragraphs 2 and 4 of the Sewage Sludge Ordinance

Soil with a pH value of ..... contains on average:

Pollutant content (mg/kg of dry matter)							
Lead		Chromium		Nickel		Zinc	
Cadmium		Copper		Mercury			
Polychlorinated biphenyls				Benzo(a)pyrene			

Results for additionally investigated parameters in accordance with § 4(3) of the Sewage Sludge Ordinance:  
.....

2.4.6 A transgression of the permitted precautionary values for metals or organic substances as per § 7(1) sentence 1 of the Sewage Sludge Ordinance

- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil and which was approved by the competent authority pursuant to § 7(3) (proof must be enclosed).

2.5 Sewage sludge-related data

2.5.1 The body responsible for investigating the sewage sludge in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address):  
.....

2.5.2 Date of the investigation: ..... Analysis number: .....

2.5.3 Outcomes of the sewage sludge investigations as per § 5(1) and (2) and § 6(1) sentence 2 and paragraph 2 sentence 1 of the Sewage Sludge Ordinance:

pH value		Iron (mg/kg of dry matter)	
----------	--	----------------------------	--

Substance name	a) Nutrient content (as a % of fresh matter)	b) Nutrient content (as a % of dry matter)
Organic matter		
Total nitrogen (N)		
Phosphorus (total)		
Phosphate (P <sub>2</sub> O <sub>5</sub> )		
Alkaline active substances (Calcium oxide - CaO)		

Substance name	Pollutant content (mg/kg of dry matter)
Arsenic (As)	
Lead (Pb)	
Cadmium (Cd)	
Copper (Cu)	

Nickel (Ni)	
Mercury (Hg)	
Thallium (TI)	
Zinc (Zn)	
Sum total of the organic halogen compounds (in the form of adsorbed organically bound halogens - AOX)	
Benzo(a)pyrene (B(a)P)	
Polychlorinated biphenyls (PCB) <sup>1)</sup> Congeners	28:
	52:
	101:
	138:
	153:
	180:
Polychlorinated dibenzodioxins and dibenzofurans (PCDD, PCDF) <sup>2)</sup> , including dioxin-like polychlorinated biphenyls (dl-PCB) – in ng of toxicity equivalents/kg of dry matter	
Polyfluorinated compounds (PFC - as the sum of the individual substances perfluorooctanoic acid [PFOA] and perfluorooctane sulfonic acid [PFOS])	

2.5.4 Results for additionally investigated parameters in accordance with § 5(5) of the Sewage Sludge Ordinance:

.....

2.5.5 A transgression of the permitted pollutant contents in accordance with § 8(1) of the Sewage Sludge Ordinance

- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.

2.5.6 Epidemic hygiene and phytohygienic quality of the manufactured sewage sludge mixture/compost in accordance with § 11 of the Sewage Sludge Ordinance:

The sewage sludge complies with the requirements in terms of epidemic hygiene and phytohygiene in accordance with § 5(1) to (3) of the Fertiliser Ordinance.

2.6 Routine quality assurance (if carried out in accordance with §§ 19 to 31 of the Sewage Sludge Ordinance)

2.6.1 Routine quality assurance agency: .....  
(name, address)

2.6.2 The quality mark owner is

- the sewage sludge producer.
- any natural person or legal entity or association of individuals who or which treats or utilises sewage sludge from a sewage sludge producer (name, address)

.....

2.6.3 The sewage sludge complies with the requirements in terms of routine quality assurance (proof of continuous quality assurance as per § 29(2) of the Sewage Sludge Ordinance must be enclosed)

I hereby confirm that the sewage sludge can be utilised on soils in accordance with the abovementioned information subject to the Sewage Sludge Ordinance in its current version and, as appropriate, in keeping with the existing additional stipulations laid down by the competent supreme Federal State authority.

.....  
(date)

.....  
(signature of the sewage sludge producer)

**2.7 Confirmation of the sewage sludge delivery**

in accordance with § 17(1) sentence 3 of the Sewage Sludge Ordinance

Sewage sludge producer (name, address):

.....

Today, from my waste water treatment plant (name and address of the production site):

.....

..... cubic metres / ... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter), in accordance with the information on delivery note number ..., delivery note date: ....., was delivered

- for application or incorporation onto or into the soil surface of the party utilising the sewage sludge in the district ....., field ....., plot number ....., size ..... hectares (instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

The sewage sludge was

- applied/incorporated onto/into the soil immediately after delivery.
- provided in accordance with § 13 for subsequent application or incorporation.

- used in the production of a sewage sludge mixture or compost.

Party utilising the sewage sludge or mixture manufacturer or compost producer (name, address):

.....

Sewage sludge carrier (name, address):.....

Registration number of the transportation vehicle if transport takes place by road:

.....

.....  
(date)

.....  
(signature of the sewage sludge producer)

**2.8 Confirmation of the delivery of the sewage sludge and the application or incorporation thereof**

in accordance with § 17(3) sentence 1 of the Sewage Sludge Ordinance

Party utilising the sewage sludge or mixture manufacturer or compost producer (name, address):

.....

On ....., the sewage sludge producer (or the third party commissioned by him/it) (name, address) .....

in accordance with the information on delivery note number ....., delivery note date: ....., applied or incorporated ..... cubic metres / ..... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter)

- for utilisation on the soil surface
  - used for agricultural purposes
  - in connection with landscaping measures
 in the district ....., field ....., plot number ....., size: ..... hectares (instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural

purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

Delivery took place on the basis of the notification in accordance with point 1 of

.....  
The permitted application quantity in accordance with § 14(1) of the Sewage Sludge Ordinance was not exceeded.

- delivered ..... cubic metres / ..... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter) for the production of a sewage sludge mixture or compost.

.....  
(date)

.....  
(signature of the party utilising the sewage sludge / mixture manufacturer / compost producer)

### Section 2

#### Land-based utilisation of a sewage sludge mixture or compost

**1. Notification regarding the envisaged delivery or the scheduled application or incorporation of a sewage sludge mixture or compost**  
in accordance with § 16(2) sentence 2 of the Sewage Sludge Ordinance

1.1 Mixture manufacturer or compost producer (name, address):

.....

1.2 Information regarding the designated utilisation of a sewage sludge mixture or compost

On ....., from my plant (name and address of the production site):

.....

..... cubic metres / ... tonnes

- of sewage sludge mixture
- of sewage sludge compost

containing a proportion of sewage sludge of ... percent (which corresponds to ..... tonnes of sewage sludge dry matter)

will be delivered,  will be applied/incorporated,  
for utilisation, namely on a soil surface

which is used for agricultural purposes  in connection with landscaping measures

in the district ....., field ....., plot number ....., size: ..... hectares  
(instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

1.3 Party utilising the sewage sludge (as the user of the sewage sludge mixture or compost) (name and address):.....

1.4 Soil-related data

1.4.1 Current land use:.....

1.4.2 Soil texture in the area of application or incorporation in accordance with § 4(1) sentence 1 point 1 of the Sewage Sludge Ordinance:.....

1.4.3 The body responsible for investigating the soil in the area of application or incorporation (§ 32(1) sentence 2 of the Sewage Sludge Ordinance) (name, address):  
 .....

1.4.4 Date of the investigation: ..... Analysis number: .....

1.4.5 Outcomes of the soil investigation as per § 4(1) sentence 1 point 2 and paragraph 4 of the Sewage Sludge Ordinance

Soil with a pH value of ..... contains on average:

Pollutant content (mg/kg of dry matter)							
Lead		Chromium		Nickel		Zinc	
Cadmium		Copper		Mercury			
Polychlorinated biphenyls				Benzo(a)pyrene			

1.4.6 Results for additionally investigated pollutants in accordance with § 4(3) of the Sewage Sludge Ordinance:  
 .....

1.4.7 A transgression of the permitted precautionary values for metals or organic substances as per § 7(1) sentence 1 of the Sewage Sludge Ordinance

- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil and which was approved by the competent authority pursuant to § 7(3) of the Sewage Sludge Ordinance (proof must be enclosed).

1.5 Sewage sludge-related data

The total quantity of sewage sludge used in producing the mixture or compost comprises ..... cubic metres / ... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter).

The following sewage sludge as per Appendix 3 Section 1 point 2.1 of the Sewage Sludge Ordinance is/was used in the production of the mixture or compost:

Delivery note number ....., delivery note date .....

(If other sewage sludges were used: please specify the respective delivery note number and the delivery note date)

1.6. Data relating to the materials which were used in the production of the sewage sludge mixture or compost in accordance with § 2(7) or § 2(8) of the Sewage Sludge Ordinance (type, source of supply, source of waste generation, reference date and reference quantity in pure form specified in cubic metres, tonnes, as a percentage of dry matter):  
 .....

1.7 Data relating to the sewage sludge mixture or compost

1.7.1 The body responsible for investigating the sewage sludge mixture / sewage sludge compost in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address):  
 .....

1.7.2 Date of the investigation: ..... Analysis number: .....

1.7.3 Results of the investigation of the sewage sludge mixture / sewage sludge compost in accordance with § 5(3), in conjunction with paragraphs 1 and 2, of the Sewage Sludge Ordinance:

pH value		Iron (mg/kg of dry matter)	
----------	--	----------------------------	--

Substance name	a) Nutrient content (as a % of fresh matter)	b) Nutrient content (as a % of dry matter)
Organic matter		

Total nitrogen (N)		
Phosphorus (total)		
Phosphate (P <sub>2</sub> O <sub>5</sub> )		
Alkaline active substances (Calcium oxide - CaO)		

Substance name	Pollutant content (mg/kg of dry matter)	
Arsenic (As)		
Lead (Pb)		
Cadmium (Cd)		
Copper (Cu)		
Nickel (Ni)		
Mercury (Hg)		
Thallium (Tl)		
Zinc (Zn)		
Sum total of the organic halogen compounds (in the form of adsorbed organically bound halogens - AOX)		
Benzo(a)pyrene (B(a)P)		
Polychlorinated biphenyls (PCB) <sup>1</sup> , Congeners	28:	
	52:	
	101:	
	138:	
	153:	
Polychlorinated dibenzodioxins and dibenzofurans (PCDD, PCDF) <sup>2</sup> , including dioxin-like polychlorinated biphenyls (dl-PCB) – in ng of toxicity equivalents/kg of dry matter		
Polyfluorinated compounds (PFC - as the sum of the individual substances perfluorooctanoic acid [PFOA] and perfluorooctane sulfonic acid [PFOS])		

- 1.7.4 Results for additionally investigated parameters in accordance with § 5(5) of the Sewage Sludge Ordinance  
.....
- 1.7.5 A transgression of the permitted pollutant contents in accordance with § 8(2) sentence 1, in conjunction with paragraph 1, of the Sewage Sludge Ordinance  
 has not been revealed through an investigation of the sewage sludge mixture / sewage sludge compost.  
 has been revealed through an investigation of the sewage sludge mixture / sewage sludge compost.
- 1.7.6 Epidemic hygiene and phytohygienic quality of the manufactured sewage sludge mixture or compost in accordance with § 11 of the Sewage Sludge Ordinance:  
The sewage sludge mixture or compost fulfils the requirements in terms of epidemic hygiene and phytohygiene in accordance with § 5(1) to (3) of the Fertiliser Ordinance.
- 1.8 Routine quality assurance (if carried out in accordance with §§ 19 to 31 of the Sewage Sludge Ordinance)
- 1.8.1 Routine quality assurance agency (name, address):  
.....
- 1.8.2 The quality mark owner is  
 the mixture manufacturer or compost producer as per point 1.1.

- any natural person or legal entity or association of individuals who or which treats or utilises the sewage sludge mixture or the sewage sludge compost of a mixture manufacturer or compost producer (name, address)

1.8.3 The sewage sludge mixture or the sewage sludge compost fulfils the requirements in terms of routine quality assurance (proof of continuous quality assurance as per § 29(2) of the Sewage Sludge Ordinance must be enclosed).

I hereby confirm that the sewage sludge compost or the sewage sludge mixture for utilisation complies with all the requirements laid down in the Sewage Sludge Ordinance in its currently valid version.

.....  
(date)

.....  
(signature of the mixture manufacturer or compost producer)

**2. Delivery note relating to the delivery of a sewage sludge mixture or compost**

in accordance with § 18(1) sentence 1 of the Sewage Sludge Ordinance

**Note:** All the delivery notes (copies) regarding the sewage sludges used during the production of the mixture or compost must be enclosed with the delivery note as an appendix.

2.1 Delivery note number ..... Delivery note date: .....

2.2 Mixture manufacturer or compost producer (name, address):

.....  
Location of the plant where the mixture or compost is produced (name and address of the production site): .....

2.3 Producer of the sewage sludge used to produce the mixture or compost (name, address; in the case of delivery of quality-assured materials, an indication of all the sewage sludge producers whose sewage sludges were used to produce the mixture or compost): .....

2.4 Party utilising the sewage sludge (as the user of the sewage sludge mixture or compost) (name, address): .....

2.5 Soil-related data

2.5.1 Current land use: .....

2.5.2 Soil texture in the area of application or incorporation in accordance with § 4(1) sentence 1 point 1 of the Sewage Sludge Ordinance: .....

2.5.3 The body responsible for investigating the soil in the area of application or incorporation in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address): .....

2.5.4 Date of the investigation: ..... Analysis number: .....

2.5.5 Outcomes of the soil investigation as per § 4(1) sentence 1 point 2 and paragraph 4 of the Sewage Sludge Ordinance

Soil with a pH value of ..... contains on average:

Pollutant content (mg/kg of dry matter)							
Lead		Chromium		Nickel		Zinc	
Cadmium		Copper		Mercury			
Polychlorinated biphenyls				Benzo(a)pyrene			

2.5.6 Results for additionally investigated pollutants in accordance with § 4(3) of the Sewage Sludge Ordinance:

.....

- 2.5.7 A transgression of the permitted precautionary values for metals or organic substances as per § 7(1) sentence 1 of the Sewage Sludge Ordinance
- has not been revealed through an investigation of the soil.
  - has been revealed through an investigation of the soil.
  - has been revealed through an investigation of the soil and which was approved by the competent authority pursuant to § 7(3) of the Sewage Sludge Ordinance (proof must be enclosed).

2.6 Sewage sludge-related data

The total quantity of sewage sludge used in producing the mixture or compost comprises ..... cubic metres / ... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to ... tonnes of dry matter).

The following sewage sludge as per Appendix 3 Section 1 point 2.1 of the Sewage Sludge Ordinance was used to produce the mixture or compost:

Delivery note number ....., Delivery note date .....

(If other sewage sludges were used: please specify the respective delivery note number and the delivery note date)

- 2.7 Data relating to the materials used to produce the sewage sludge mixture or compost in accordance with § 2(7) or (8) of the Sewage Sludge Ordinance  
(type, source of supply, source of waste generation, reference date and reference quantity in pure form specified in cubic metres, tonnes, as a percentage of dry matter):.....

2.8 Data relating to the sewage sludge mixture or compost

- 2.8.1 The body responsible for investigating the sewage sludge mixture / sewage sludge compost in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address):  
.....

- 2.8.2 Date of the investigation: ..... Analysis number: .....

- 2.8.3 Outcomes of the investigation of the sewage sludge mixture / sewage sludge compost in accordance with § 5(3), in conjunction with paragraphs 1 and 2, of the Sewage Sludge Ordinance:

pH value		Iron (mg/kg of dry matter)	
----------	--	----------------------------	--

Substance name	a) Nutrient content (as a % of fresh matter)	b) Nutrient content (as a % of dry matter)
Organic matter		
Total nitrogen (N)		
Phosphorus (total)		
Phosphate (P <sub>2</sub> O <sub>5</sub> )		
Alkaline active substances (Calcium oxide - CaO)		

Substance name	Pollutant content (mg/kg of dry matter)
Arsenic (As)	
Lead (Pb)	
Cadmium (Cd)	
Copper (Cu)	
Nickel (Ni)	
Mercury (Hg)	
Thallium (Tl)	
Zinc (Zn)	

Sum total of the organic halogen compounds (in the form of adsorbed organically bound halogens - AOX)	
Benzo(a)pyrene (B(a)P)	
Polychlorinated biphenyls (PCB) <sup>1)</sup> , Congeners	28:
	52:
	101:
	138:
	153:
	180:
Polychlorinated dibenzodioxins and dibenzofurans (PCDD, PCDF) <sup>2)</sup> , including dioxin-like polychlorinated biphenyls (dl-PCB) – in ng of toxicity equivalents/kg of dry matter	
Polyfluorinated compounds (PFC - as the sum of the individual substances perfluorooctanoic acid [PFOA] and perfluorooctane sulfonic acid [PFOS])	

2.8.4 Results for additionally investigated parameters in accordance with § 5(5) of the Sewage Sludge Ordinance:

.....

2.8.5 A transgression of the permitted pollutant contents in accordance with § 8(2) sentence 1, in conjunction with paragraph 1, of the Sewage Sludge Ordinance

- has not been revealed through an investigation of the soil.
- has been revealed through an investigation of the soil.

2.8.6 Epidemic hygiene and phytohygienic quality of the manufactured sewage sludge mixture or compost in accordance with § 11 of the Sewage Sludge Ordinance:

The sewage sludge mixture or compost fulfils the requirements in terms of epidemic hygiene and phytohygiene in accordance with § 5(1) to (3) of the Fertiliser Ordinance.

2.9 Routine quality assurance (if carried out in accordance with §§ 19 to 31 of the Sewage Sludge Ordinance)

2.9.1 Routine quality assurance agency (name, address):

.....

2.9.2 The quality mark owner is

- the mixture manufacturer or compost producer as per point 2.2.
- any natural person or legal entity or association of individuals who or which treats or utilises the sewage sludge mixture or the sewage sludge compost of a mixture manufacturer or compost producer (name, address)

.....

2.9.3 The sewage sludge mixture or the sewage sludge compost fulfils the requirements in terms of routine quality assurance (proof of continuous quality assurance as per § 29(2) of the Sewage Sludge Ordinance must be enclosed).

I hereby confirm that

- the sewage sludge mixture produced
- the sewage sludge compost produced

from our plant (name and address of the production site):

.....

can be utilised on soils in accordance with the abovementioned information subject to the Sewage Sludge Ordinance in its current version and, as appropriate, in keeping with the existing additional stipulations laid down by the competent supreme Federal State authority.

.....

.....  
(date)

.....  
(signature of the mixture manufacturer or compost producer)

**2.10 Confirmation of the delivery of the sewage sludge mixture or compost**  
in accordance with § 18(1) sentence 3 of the Sewage Sludge Ordinance

Mixture manufacturer or compost producer (name and address):  
.....

I today delivered ... cubic metres / ... tonnes

- of sewage sludge mixture
- of sewage sludge compost

containing a proportion of sewage sludge of ... percent (which corresponds to ... tonnes of sewage sludge dry matter) in accordance with the information on delivery note number ..... of ..... for application onto, or incorporation into, the soil surface of the party utilising the sewage sludge in the district ....., field ....., plot number ....., size: ..... hectares (instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

The sewage sludge mixture or compost was

- applied/incorporated immediately after delivery.
- provided in accordance with § 13 for subsequent application or incorporation.

Party utilising the sewage sludge (as the user of the sewage sludge mixture or compost)  
(name and address):  
.....

Carrier of the sewage sludge mixture or compost (name, address):  
.....

Registration number of the transportation vehicle if transport takes place by road:  
.....

.....  
(date)

.....  
(signature of the mixture manufacturer or compost producer)

**2.11 Confirmation of the delivery and the application or incorporation of the sewage sludge mixture or compost**  
in accordance with § 18(3) sentences 1 and 2 of the Sewage Sludge Ordinance

Party utilising the sewage sludge (as the user of the sewage sludge mixture or compost)  
.....

(name, address)

I today received from the mixture manufacturer or compost producer (name, address)  
.....

in accordance with the information on delivery note number ..... of .....  
..... cubic metres / ... tonnes

- of sewage sludge mixture
- of sewage sludge compost

with a dry matter content of ..... percent (which corresponds to ... tonnes of dry matter) for application or incorporation onto or into the soil surface

- used for agricultural purposes
- in connection with landscaping measures

in the district ....., field ....., plot number ....., size: ..... hectares (instead of the data relating to the district, field, plot number and size, another proof of conformity with zoning regulations with comparable accuracy which is approved by the competent authority [in the case of utilisation on soil used for agricultural purposes, in consultation with the competent specialist agricultural authority] can be enclosed).

Delivery took place on the basis of the notification of .....

The application or incorporation of the sewage sludge mixture or compost took place on ..... involving (name, address):.....

The permitted application quantity in accordance with § 14(2) of the Sewage Sludge Ordinance was not exceeded.

.....  
(date)

.....  
(signature of the party utilising the sewage sludge)

---

<sup>1</sup> Systematic numbering of the PCBs [polychlorinated biphenyls] in accordance with the Rules of the International Union of Pure and Applied Chemistry (IUPAC).  
<sup>2</sup> Pursuant to the calculation rule in Appendix 2 point 2.3 of the Sewage Sludge Ordinance.

**Article 2**  
**Amending the Landfill Ordinance**

The Landfill Ordinance of 27 April 2009 (Federal Law Gazette I p. 900), last amended by Article 2 of the Ordinance of 4 March 2016 (Federal Law Gazette I p. 382), is amended as follows:

1. § 2 is amended as follows:

a) The following points 19, 20 and 21 are inserted after point 18:

"19. Sewage sludge incineration facility:

a firing installation as per § 2(4) of the Ordinance on the incineration and co-incineration of waste of 2 May 2013 (Federal Law Gazette I pp. 1021, 1044, 3754), in its current version, in which sewage sludge is incinerated for the purpose of pre-treatment, in which connection the thermal process used in the firing installation may also comprise other similar processes such as gasification, partial combustion and thermal treatment processes involving indirect heating of the treatment reactor or a combination of these, provided the solid carbon-containing residues arising from the pre-treatment of the sewage sludge are not supplied for incineration but for phosphorus recovery or utilisation or preparation prior to utilisation;

20. Sewage sludge co-incineration facility:

a firing installation or large combustion plant in accordance with § 2(2) or (3) of the Ordinance on the incineration and co-incineration of waste in which sewage sludge is co-incinerated for the purpose of pre-treatment;

21. Carbon-containing residue:

carbon-containing material following thermal pre-treatment of the sewage sludge in a facility with gasification, partial combustion or thermal treatment processes involving indirect heating of the treatment reactor or a combination of these, in which connection the carbon included is available solely in elemental form;".

b) The previous points 19 to 33 become points 22 to 36.

2. § 23(6) is amended as follows:

a) In sentence 1, the words "In the case of ashes from sewage sludge mono-incineration" are replaced by the words "In the case of ashes from sewage sludge incineration and from sewage sludge co-incineration and in the case of carbon-

containing residues from the pre-treatment of sewage sludge as a result of similar thermal processes".

b) Sentence 3 is deleted.

### **Article 3**

#### **Consequential amendments**

(1) § 1(2) point 1 of the Ordinance on plants for the biological treatment of waste of 20 February 2001 (Federal Law Gazette I p. 317), as amended by Article 3 of the Ordinance of 27 April 2009 (Federal Law Gazette I p. 900), is amended as follows:

1. The word "from" is inserted before the word "products".
2. The words "sewage sludges as per § 2(2) of the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), as amended by the Ordinance of 6 March 1997 (Federal Law Gazette I p. 446)" are replaced by the words "from sewage sludge as per § 2(2), a sewage sludge mixture as per § 2(7) or a sewage sludge compost as per § 2(8) of the Sewage Sludge Ordinance of ... [insert: the date of issue and publication reference of the Ordinance], in its current version,".
3. The words "and of the use of a mixture" are replaced by the words "and from a mixture".

(2) In § 9(2) sentence 6 of the Biowaste Ordinance in the version published on 4 April 2013 (Federal Law Gazette I p. 658), last amended by Article 5 of the Ordinance of 5 December 2013 (Federal Law Gazette I p. 4043), is amended as follows:

1. The words "Annex 1 to the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by Article 9 of the Ordinance of 9 November 2010 (Federal Law Gazette I p. 1504)," are replaced by the words "Appendix 2 to the Sewage Sludge Ordinance of ... [insert: the date of issue and publication reference of the Ordinance]".
2. The word "bestimmten" [certain] is replaced by the word "bestimmte" [certain].

(3) In § 3(1) point 1 of the Federal Soil Protection Act, the words "and of the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by Article 9 of the Ordinance of 9 November 2010 (Federal Law Gazette I p. 1504)" are deleted.

(4) The Federal Soil Protection and Contaminated Sites Ordinance is amended as follows:

1. In § 12(1), the words "and of the Sewage Sludge Ordinance" are deleted.
2. Annex 1 is amended as follows:

- a) In Table 5, final row, third column, the words "April 98, VDI Guideline 3499, sheet 1: March 90" are replaced by the statement "October 2000".
- b) Point 6.1 is amended as follows:
  - aa) The statement "DIN 38414-24: April 98" is replaced by the statement "DIN 38414-24: October 2000".
  - bb) The words "VDI Guideline 3499, sheet 1: Emission measurement - Measurement of residual materials. Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) in clean gas and crude gas - dilution method; Determination in filter dust, ash and slag. VDI manual - Maintaining clean air, vol. 5 (draft March 1990)" are deleted.
3. In Annex 2 point 4.3 letter c, second indent, sentence 2 is deleted.

#### **Article 4**

##### **Amending the Sewage Sludge Ordinance**

The Sewage Sludge Ordinance of ... [insert: the date of issue and publication reference of the Ordinance in accordance with Article 1] is amended as follows:

1. In the Table of Contents, after the statement relating to § 3, the statement "§ 3a Reporting obligations; phosphorus investigations" is inserted.
2. The following § 3a is inserted after § 3:

##### **"§ 3a Reporting obligations; phosphorus analyses**

(1) Sewage sludge producers operating a waste water treatment plant in the calendar year 2023 must present to the competent authority by 31 December 2023 at the latest a report on the intended measures and those already initiated for guaranteeing the phosphorus recovery to be carried out as of ... [insert: the first calendar day of the twelfth year following the entry into force of this Ordinance in accordance with Article 8(1) sentence 1]. Sewage sludge producers commissioning a waste water treatment plant for the first time after 31 December 2023 must present the report under sentence 1 no later than six months after operations commence at the waste water treatment plant.

(2) Sewage sludge producers operating a waste water treatment plant in the calendar year 2023 must arrange for samples of the sewage sludge resulting in 2023 to be examined in terms of their phosphorus content in accordance with the provisions under § 32. The outcome of the examination must be included in the report as per paragraph

1 sentence 1. If the sewage sludge has already been examined in terms of its phosphorus content as per regulations in accordance with § 5(1) point 4, the sewage sludge producer may use the results of this investigation provided they are not more than one year old.

(3) Sewage sludge producers commissioning a waste water treatment plant after 31 December 2023 must arrange for samples of the resulting sewage sludge to be examined within six months of starting operations at the waste water treatment plant in accordance with the provisions under § 32. The outcome of the examination must be included in the report as per paragraph 1 sentence 2.

(4) The sewage sludge investigation as per paragraphs 2 and 3 must be repeated in 2027. Paragraph 2 sentence 3 applies accordingly. The sewage sludge producer shall present the outcome of the investigation to the competent authority within four weeks of the investigation having been carried out."

3. § 36 is amended as follows:

*[Provisions are inserted at a later stage in proceedings; refer to the note in Article 1 § 36 of the draft]*

## **Article 5**

### **Further amendments to the Sewage Sludge Ordinance**

The Sewage Sludge Ordinance, last amended by Article 4 of this Ordinance, is amended as follows:

1. The Table of Contents to the Ordinance is amended as follows:

a) The statement "§ 3a Reporting obligations; phosphorus analyses" is replaced by the statements

"Part 1a

Requirements in terms of the recovery of phosphorus

§ 3a Phosphorus recovery from sewage sludge

§ 3b Phosphorus recovery from sewage sludge incineration ash or carbon-containing residues

§ 3c Investigation obligations

§ 3d Obligations to furnish proof

§ 3e Requirement to keep a record in the case of phosphorus recovery".

b) In Part 2, the statement relating to Section 4 is worded as follows:

"Notification and delivery note procedures; requirement to keep a record".

- c) After the statement relating to § 18, the statement  
"§ 18a Requirement to keep a record in the case of land-based utilisation" is inserted.
  - d) The information relating to "Part 5. Concluding provisions" is amended as follows:  
The information relating to §§ 37 to 39 is deleted.
  - e) The information relating to Appendix 3 is amended as follows:
    - aa) After the statement "Appendix 3", the statement "§ 3d(3)," is inserted in the brackets before the statement "§ 16(3)".
    - bb) The word "proofs," is inserted before the word "notifications".
2. § 1 is amended as follows:
- a) Paragraph 1 is amended as follows:
    - aa) After the word "governs", the words
      - "1. the recovery of phosphorus from
        - a) sewage sludge and
        - b) the sewage sludge incineration ash which accrues during the pre-treatment of sewage sludge in a sewage sludge incineration facility or a sewage sludge co-incineration facility or from the carbon-containing residue," are inserted.
    - bb) The previous point 1 becomes point 1a.
  - b) In paragraph 2, after the statement "1. sewage sludge producer", the words  
"1a. operator of a sewage sludge incineration facility,  
1b. operator of a sewage sludge co-incineration facility,"  
are inserted.
3. § 2 is amended as follows:
- a) The following paragraph 4a is inserted after paragraph 4:  
"(4a) Phosphorus recovery is that recovery procedure by means of which the phosphorus is reclaimed
    - 1. from sewage sludge or
    - 2. from sewage sludge incineration ash of the sewage sludge used in a sewage sludge incineration facility or sewage sludge co-incineration facility or from carbon-containing residue."
  - b) The following paragraphs 11a to 11d are inserted after paragraph 11:  
"(11a) A sewage sludge incineration facility is a firing installation as per § 2(4) of the Ordinance on the incineration and co-incineration of waste in which sewage sludge is

incinerated for the purpose of pre-treatment, in which connection the thermal process used in the firing installation may also comprise other similar processes such as gasification, partial combustion and thermal treatment processes involving indirect heating of the treatment reactor or a combination of these, provided the solid carbon-containing residues arising from the pre-treatment of the sewage sludge are not supplied for incineration but for phosphorus recovery or utilisation or preparation prior to utilisation.

(11b) A sewage sludge co-incineration facility is a firing installation or large combustion plant in accordance with § 2(2) or (3) of the Ordinance on the incineration and co-incineration of waste in which sewage sludge is co-incinerated for the purpose of pre-treatment.

(11c) A long-term storage facility is a storage facility as per § 23(1) and (6) of the Landfill Ordinance in which sewage sludge incineration ashes from a sewage sludge incineration facility or from a sewage sludge co-incineration facility, as well as carbon-containing residues, are stored.

(11d) Carbon-containing residue is the carbon-containing material following thermal pre-treatment of the sewage sludge in a facility with gasification, partial combustion and thermal treatment processes involving indirect heating of the treatment reactor or a combination of these, in which connection the carbon included is available solely in elemental form."

4. § 3(1) and (2) is replaced by the following paragraphs 1 to 3:

"(1) The sewage sludge producer shall supply the sewage sludge which accrues in his/its waste water treatment plant

1. directly for phosphorus recovery in accordance with § 3a if the sewage sludge has a phosphorus content of 20 grammes or more per kilogramme of dry matter, or
2. for thermal pre-treatment in a sewage sludge incineration facility or a sewage sludge co-incineration facility.

The sewage sludge in accordance with sentence 1 point 2 does not need to be supplied if it has a phosphorus content of less than 20 grammes per kilogramme of dry matter.

(2) The operator of a sewage sludge incineration facility and the operator of a sewage sludge co-incineration facility must supply the sewage sludge incineration ash and the carbon-containing residue which accrue following pre-treatment of the sewage sludge in accordance with paragraph 1 point 2, irrespective of the phosphorus content of the sewage sludge used,

1. for phosphorus recovery or
2. for material recycling while utilising the phosphorus content of the incineration ash or the carbon-containing residue

in accordance with § 3b.

(3) By way of deviation from paragraph 1, sewage sludge producers who operate a waste water treatment plant with an approved design capacity of up to 100,000 population equivalents can utilise the sewage sludge which accrues in this facility on or in soils in accordance with the requirements mentioned in Parts 2 and 3. Utilisation of sewage sludge from a waste water treatment plant with an approved design capacity of up to 100,000 population equivalents in accordance with the stipulations under sentence 1 is also then permitted if the sewage sludge undergoes final treatment in another waste water treatment plant belonging to the same operator and the waste water treatment plant which receives the sewage sludge has an approved design capacity of up to 100 000 population equivalents."

5. The following heading is inserted after § 3:

**"Part 1a  
Requirements in terms of the recovery of phosphorus"**

6. § 3a is replaced by the following § 3a to § 3e:

**"§ 3a  
Phosphorus recovery from sewage sludge"**

(1) In order to recover phosphorus from sewage sludge in accordance with § 3(1) point 1, a procedure shall be applied which ensures a reduction in the phosphorus content of the treated sewage sludge measured in accordance with § 3c(1)

1. by at least 50% and
2. to less than 20g/kg of dry matter.

If there is phosphorus content in excess of 40g/kg of sewage sludge dry matter and a recovery procedure is not suitable for reducing the phosphorus content of the treated sewage sludge to less than 20g/kg of dry matter, sentence 1 point 2 shall not apply.

(2) Prior to the execution of phosphorus recovery, the sewage sludge may be mixed with other sewage sludges provided the sewage sludge added each time has a phosphorus content of 20 grammes or more per kilogramme of dry matter. Sewage sludges from waste water treatment plants of different sewage sludge producers may only be mixed following the conclusion of an agreement between the sewage sludge

producers involved. The agreement must especially nominate a sewage sludge producer who is responsible for carrying out phosphorus recovery. A copy of the agreement must be presented to the competent authority at the request of the latter.

### **§ 3b**

#### **Phosphorus recovery from sewage sludge incineration ash or carbon-containing residues**

(1) In order to recover phosphorus from the sewage sludge incineration ash and the carbon-containing residue in accordance with § 3(2) sentence 1 point 1, a procedure shall be applied by means of which at least 80% of the phosphorus content of the incineration ash or the carbon-containing residue is reclaimed.

(2) The sewage sludge co-incineration as per § 3(1) sentence 1 point 2 shall take place as follows:

1. the incineration plant shall be coal-fired and
2. the coal used shall result in an ash content of less than 2.5%, averaged over the year, in relation to the natural state of the coal.

(3) Prior to carrying out one of the measures referred to in § 3(2), the sewage sludge incineration ash and the carbon-containing residue may be stored in a long-term storage facility in accordance with § 23(6) of the Landfill Ordinance provided

1. they cannot be mixed with other types of waste, substances or materials and a surface run-off of the sewage sludge incineration ash and the carbon-containing residue is excluded and
2. the possibility of subsequent phosphorus recovery from the sewage sludge incineration ash and the carbon-containing residue, or the possibility of material recycling using the phosphorus content of the sewage sludge incineration ash and the carbon-containing residue is maintained.

### **§ 3c**

#### **Investigation obligations**

(1) For every 500 tonnes of sewage sludge dry matter or part thereof, the sewage sludge producer shall make arrangements, at intervals not exceeding six months, for samples of the sewage sludge generated in his/its waste water treatment plant to be investigated in terms of their phosphorus content in accordance with the provisions under § 32. If the sewage sludge has already been investigated in terms of its phosphorus content as per regulations in accordance with § 5(1) point 4, the sewage sludge producer may use the results of this investigation.

(2) By way of deviation from paragraph 1 sentence 1, following an initial examination, a re-examination is not required as long as the sewage sludge is pre-treated in a sewage sludge incineration facility or in a sewage sludge co-incineration facility as per § 3b(1).

(3) The sewage sludge producer shall present the results of the investigations as per paragraph 1 to the competent authority within four weeks of the investigations having been carried out.

### **§ 3d**

#### **Obligations to furnish proof**

(1) The sewage sludge producer shall furnish proof regarding

1. the outcome of the phosphorus recovery carried out in accordance with § 3(1) sentence 1 point 1,
2. the feeding of the sewage sludge to a sewage sludge incineration facility or to a sewage sludge co-incineration facility in accordance with § 3(1) sentence 1 point 2,
3. the sewage sludges used for mixing in accordance with § 3a(2) sentence 1 and
4. the outcome of the sewage sludge investigation in accordance with § 3c(1).

(2) The operator of a sewage sludge incineration facility or a sewage sludge co-incineration facility shall furnish proof regarding

1. the outcome of the phosphorus recovery carried out in accordance with § 3(2) point 1,
2. the material recycling of the incineration ash and the carbon-containing residue in accordance with § 3(2) point 2 and
3. the long-term storage of the incineration ash and the carbon-containing residue in accordance with § 3b(3).

(3) The proof under paragraphs 1 and 2 must include the information provided for in Appendix 3 Section 1. The proof must be filled out correctly and in full.

(4) The sewage sludge producer shall forward a copy of the proof as per paragraph 1 to the authority responsible for the sewage sludge producer. The operator of the sewage sludge incineration facility or the sewage sludge co-incineration facility shall forward a copy of the proof as per paragraph 2 to the sewage sludge producer whose sewage sludge has been pre-treated in the incineration plant and also to the competent authority for this sewage sludge producer.

(5) The sewage sludge producer, the operator of the sewage sludge incineration facility and the operator of the sewage sludge co-incineration facility must keep the evidence for ten years in each case from the time phosphorus recovery and material recycling of the incineration ash and the carbon-containing residue has been concluded. In the case

of the long-term storage of the sewage sludge incineration ash and the carbon-containing residue in accordance with § 3b(3), the retention period shall begin following the completion of phosphorus recovery from the stored incineration ash and following the completion of material recycling of the stored incineration ash and the carbon-containing residue.

### **§ 3e**

#### **Requirement to keep a record in the case of phosphorus recovery**

The sewage sludge producer shall keep a record regarding

1. the implementation of phosphorus recovery from sewage sludge in accordance with § 3(1) sentence 1 point 1 and from sewage sludge incineration ashes and the carbon-containing residues as per § 3(2) point 1,
2. the material recycling of the incineration ashes and the carbon-containing residues in accordance with § 3(2) point 2 or
3. the storage of the incineration ashes and the carbon-containing residues in a long-term storage facility in accordance with § 3b(3).

The record must include the information provided for under § 34(1)."

7. § 15 is amended as follows:

a) The following paragraph 1a is inserted after paragraph 1:

"(1a) The delivery and the application and incorporation of sewage sludge from waste water treatment plants with an approved design capacity in excess of 100,000 population equivalents and the application and incorporation of a sewage sludge mixture or compost produced using sewage sludge from such plants onto or into soils is not permitted. The authority responsible for the application or incorporation area may, in the event of application onto, or incorporation into, soil used for agricultural purposes, in consultation with the competent specialist agricultural authority, approve an exemption from the ban on application and incorporation in individual cases in accordance with sentence 1."

b) In paragraph 3, the words "upwards of 1,000 population equivalents" are replaced by the words "from 1,000 to 100,000 population equivalents".

8. A semi-colon and the words "requirement to keep a record" are added to the heading to Section 4.

9. In § 16(3) sentence 1, the statement "Section 1" is replaced by the statement "Section 2" and the statement "Section 2" is replaced by the statement "Section 3".

10. In § 17(1) sentences 1 and 3, paragraph 2 and paragraph 3 sentence 3, every occurrence of the statement "Section 1" is replaced by the statement "Section 2".
11. In § 18(1) sentences 1 and 3, paragraph 2 and paragraph 3 sentence 2, every occurrence of the statement "Section 2" is replaced by the statement "Section 3".
12. The following § 18a is inserted after § 18:

**"§ 18a**

**Requirement to keep a record in the case of land-based utilisation**

The sewage sludge producer shall keep a record of the execution of the land-based utilisation of sewage sludge, sewage sludge mixtures and sewage sludge composts which must include the information provided for under § 34(1a)."

13. § 34 is amended as follows:

a) Paragraph 1 is reworded as follows:

"(1) The record to be kept in relation to the respective calendar year under Part 1a of this Ordinance must include the following information:

- "1. the quantity of sewage sludge in tonnes of dry matter which is generated in total in a waste water treatment plant during the calendar year,
2. the proportionate quantity of sewage sludge under point 1 in tonnes of dry matter which
  - a) was supplied for phosphorus recovery in accordance with § 3(1) sentence 1 point 1,
  - b) was supplied to a sewage sludge incineration facility or a sewage sludge co-incineration facility as per § 3(1) sentence 1 point 2, divided according to the proportionate quantity of sewage sludge in tonnes of dry matter,
    - aa) from whose sewage sludge incineration ash or carbon-containing residue phosphorus was reclaimed in accordance with § 3(2) point 1,
    - bb) whose sewage sludge incineration ash or carbon-containing residue was utilised with the aid of the phosphorus content in accordance with § 3(2) point 2,
  - c) was stored in a long-term storage facility in accordance with § 3b(3),
3. the content of phosphorus in sewage sludge, in grammes per kilogramme of sewage sludge dry matter, measured during the investigations under § 3c(1)."

b) The previous paragraph 1 becomes paragraph 1a.

c) In paragraph 1a, the first clause is worded as follows:

"The record to be kept in relation to the respective calendar year under Parts 2 and 3 of this Ordinance must include the following information:"

d) In paragraph 2, the statement "paragraph 1" is replaced by the statement "paragraph 1a".

e) Paragraph 3 is amended as follows:

aa) Sentence 1 is worded as follows:

"The sewage sludge producer shall forward electronically the information under paragraphs 1 and 1a relating to the previous calendar year to the following competent authority by 15 March of the following year:

1. Information under paragraph 1, to the authority responsible for the sewage sludge producer,
2. Information under paragraph 1a numbers 1 to 7, to the authority responsible for the area of application and incorporation."

bb) In sentence 2, the statement "and paragraph 1a" is inserted after the statement "paragraph 1".

14. § 36 is amended as follows:

*[Provisions are inserted at a later stage in proceedings; refer to the note in Article 1 § 36 of the draft]*

15. § 37 to § 39 are deleted.

16. Appendix 3 is amended as follows:

a) After the statement "Appendix 3", the statement "§ 3d(3)," is inserted in brackets before the statement "§ 16(3)".

b) In the heading, the word "evidence," is inserted before the word "notifications".

c) The following information precedes the previous Section 1:

### **"Section 1**

#### **Phosphorus recovery from sewage sludge**

The following proof (in its original form) must be filled out and forwarded by the sewage sludge producer in full.

**Proof of phosphorus recovery from sewage sludge**  
in accordance with § 3d(3) of the Sewage Sludge Ordinance

1. Sewage sludge producers:  
Sewage sludge incineration facility operator:

Sewage sludge co-incineration facility operator:

(name, address, location of the waste water treatment plant or incineration plant)

2. Sewage sludge investigation in accordance with § 3c(1) of the Sewage Sludge Ordinance
  - 2.1 The body responsible for investigating the sewage sludge in accordance with § 32(1) sentence 2 of the Sewage Sludge Ordinance (name, address) .....
  - 2.2 Date of the investigation: ..... Analysis number: ...
  - 2.3 Outcome of the sewage sludge investigation in accordance with § 3c(1) of the Sewage Sludge Ordinance:

Phosphorus (P <sub>total</sub> )	... mg/kg of dry matter (= P <sub>2</sub> O <sub>5</sub> content ... mg/kg of dry matter)
-------------------------------------	---

3. The sewage sludge was blended with the following sewage sludges in accordance with § 3a(2) sentence 1 of the Sewage Sludge Ordinance:

(Information concerning the sewage sludge producer as well as the source of supply, reference date and reference quantity of the sewage sludges used for mixing in m<sup>3</sup>, tonnes, as a % of dry matter)

4. For phosphorus recovery, ... cubic metres / ... tonnes of sewage sludge with a dry matter content of ... percent (which corresponds to a quantity of ... tonnes of dry matter) were used.

Phosphorus recovery took place on .....

- from the sewage sludge in accordance with § 3(1) sentence 1 point 1 of the Sewage Sludge Ordinance
- from the sewage sludge incineration ash / from the carbon-containing residue in accordance with § 3(2) point 1 of the Sewage Sludge Ordinance
- as a result of material recycling of the sewage sludge incineration ash / the carbon-containing residue using the phosphorus content in accordance with § 3(2) point 2.

The following quantity of phosphorus was recovered: ... tonnes of dry matter.

5. Following execution of phosphorus recovery, the sewage sludge / sewage sludge incineration ash / carbon-containing residue contains ... grammes of phosphorus per kilogramme of dry matter.
6. The sewage sludge incineration ash / carbon-containing residue was supplied on ..... in a quantity of ... tonnes of dry matter for long-term storage in accordance with § 3b(3) of the Sewage Sludge Ordinance (name and address of the storage facility):  
.....

7. The stored sewage sludge incineration ash / carbon-containing residue in accordance with § 3b(3) of the Sewage Sludge Ordinance
  - was subjected to phosphorus recovery in accordance with § 3(2) point 1 of the Sewage Sludge Ordinance.
  - was supplied for material recycling using the phosphorus content of the incineration ash / carbon-containing residue in accordance with § 3(2) point 2 of the Sewage Sludge Ordinance on ..... in a quantity of ... tonnes of dry matter.

The following quantity of phosphorus was recovered: ... tonnes of dry matter.

.....  
(date)

.....  
(signature of the sewage sludge producer / operator of a sewage sludge incineration facility or a sewage sludge co-incineration facility)"

d) The previous Section 1 becomes Section 2 and the previous Section 2 becomes Section 3.

## **Article 6**

### **Further amendments to the Sewage Sludge Ordinance**

The Sewage Sludge Ordinance, last amended by Article 5 of this Ordinance, is amended as follows:

In § 3(3) and § 15(1a) and (3), every occurrence of the statement "100,000 population equivalents" is replaced by the statement "50,000 population equivalents".

## **Article 7**

### **Promulgation authorisation**

The Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety may publish the wording of the Sewage Sludge Ordinance in the Federal Law Gazette in the version which is applicable from 1 January ... [insert: the number of the first year following the entry into force of this Ordinance in accordance with Article 8(1)].

## **Article 8**

### **Entry into force, abrogation**

(1) Paragraphs 2 to 4 notwithstanding, this Ordinance shall enter into force on the day following promulgation. At the same time, the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by the [...] of [...] (Federal Law Gazette I p. ...), shall cease to be valid.

(2) Article 4 shall enter into force on 1 January 2023.

(3) Article 5 shall enter into force on 1 January ... [insert: the number of the twelfth year following the entry into force of this Ordinance in accordance with Article 8(1)].

(4) Article 6 shall enter into force on 1 January ... [insert: the number of the fifteenth year following the entry into force of this Ordinance in accordance with Article 8(1)].

Approved by the *Bundesrat*.

Berlin, [date]